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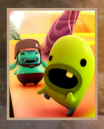
3dcreative

Issue 054 February 2010

Interview
Cesar Dacol Jr.



The Gallery
Rodolfo Roth, Özcan Şener, Sergey Vasilev & more!

Project Overview
"Cross of Iron"
by Eric Zhang

FREE – Inside Look!
Digital Art Masters: Volume 4
Project Overview by Gregory Callahan

DOWNLOAD RESOURCES
- Free Environment Lighting Artist Scene & Textures

ENVIRONMENT LIGHTING

SUNSETS, SKYS AND BACKPLATES

Environment Lighting: Outdoor
Sunrise / Sunset- Andrew Finch, **Andrzej Sykut** & **Fredi Voss** bring us the second chapters in our outdoor lighting series

Creating a Fantasy Scene
In the forth chapter of this tutorial series, **Richard Tilbury** will concentrate on adding the backplates, sky and general scenery into the scene

ZBrush & 3dsmax Character Modeling
Following on from the first chapter, **Cédric Séaut** will now show the step by step progress used to create a Shoe (ZBrush Plastic Sculpting)

V-Ray for 3ds Max
In the third chapter of this tutorial series dedicated to the V-Ray renderer, **Eric Ennis** will look at Vray's advanced rendering settings

Editorial

Hello, and welcome to the February issue of 3DCreative. We hope you all enjoyed the January issue, and are all aptly excited about what you have to look forward to in this month's issue. And what an issue we have for you! First up this month we are all very excited to be able to present you with an Interview with the character developer who has worked on projects like Fantastic Four, 300 and Journey to the Centre of the Earth 3D, the one and only Cesar Dacol Jr. In his interview we find out how it was to make the transition from make – up effects to computer based work. What a start to the issue!

As always we are striving to get the best content for you and we deliver again with the second installation in the Cédric Seaut character modeling tutorial. In this month's issue Cédric shows us how to model the shoe for our character. We hope you enjoy his step by step guide, excuse the pun, I couldn't help myself!

Eric Ennis continues his V-Ray for 3DS Max series for us and in this issue he gets technical and talks us through the Vray settings. He shows us in depth how to use some of the settings and also gives a sneak peak at some of the special features that V-Ray has to offer.

Our very own Richard Tilbury continues his fascinating series creating a Fantasy Scene, and in this installment Richard talks us through the use of Photography and Post Production. Find out how to get the best effects for your final image by using photographs of the things that inspired your scene.

We also bring you the project overview for the excellent image Cross of Iron by Eric Zhang. Eric goes into great detail shows us how to start creating your image and where to look for your inspiration. We also have an excellent images gallery featuring work from Lino Masciulli, Özcan Şener, Rodolfo Roth, Alvydas Jaktkialo and many more!

Last but by no means least we continue our environmental lighting tutorial, dealt with by Andrew Finch for Mental Ray, Andrzej Sykut for V-Ray and Fredi Voss for Cinema 4D. The more observant of you may have noticed a name missing from the list, sadly we will not be able to bring you the Maya section by Joseph Harford this month due to unforeseen circumstances, but don't despair, fingers crossed we will be able to have an epic Maya double bill in the march issue.

We hope you all enjoy the new issue!

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Wherever you see this symbol, click it to download resources, extras & even movies!


Environment Lighting: Outdoor Scene by Fredi Voss | Page 128

Get the most out of your Magazine!

If you're having problems viewing the double-page spreads that we feature in this magazine, follow this handy little guide on how to set up your PDF reader!

Setting up your PDF reader

For optimum viewing of the magazine, it is recommended that you have the latest Acrobat Reader installed. You can download it for free, here: DOWNLOAD!

To view the many double-page spreads featured in 3DCreative magazine, you can set the reader to display 'two-up', which will show double-page spreads as one large landscape image:

1. Open the magazine in Reader;
2. Go to the View menu, then Page Display;
3. Select Two-up Continuous, making sure that Show Cover Page is also selected.

That's it!

Contributing Artists

Every month artists from around the world contribute to 3DCreative, and you can find out a little more about them right here! If you'd like to get involved in 3DCreative magazine, please contact: simon@3dtotal.com

Environment Lighting Outdoor Scene

Chapter 2 of our popular Environment Lighting tutorial series with a great lineup of talented artists: **Andrew Finch** (**3ds Max + MR**), **Andrzej Sykut** (**3ds Max + Vray**), **Joseph Harford** (**Maya**) and **Fredi Voss** (**Cinema 4D**).

Richard Tilbury

Has had a passion for drawing since being a couple of feet tall. He studied fine art and was eventually led into the realm of computers several years ago. His brushes have slowly been dissolving in white spirit since the late 90s, and now his graphics tablet has become their successor. He still sketches regularly, balancing his time between 2D and 3D.

www.richardtilburyart.com | rich@3dtotal.com

Andrew Finch

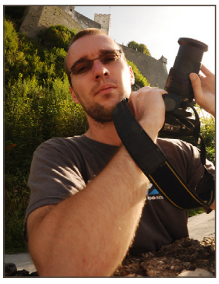
Aged 27 and living in the great city of Birmingham in the U.K., Andrew has a degree in 3D Animation which inspired his passion for environment art. He now works as an environment artist at Rebellion, and says, "Working in the games industry is exciting: you never know what the next project will be and there's always something new to learn. This helps to keep you creative and grow as an artist." afinchy@googlemail.com

Fredi Voss

Living and working as a fine artist and 3D freelancer in Germany, Fredi – a.k.a. rollmops – can often be found on the various web communities, where he has also won several awards. His client list includes Audi and Siemens, and he also has as Animago Award and a Fine Art degree under his belt!

http://fredivoss.cgsociety.org/gallery/

vuuxx@gmx.de



Andrzej Sykut

When it comes to CG, Andrzej is a bit of a generalist, but lighting is where the fun is for him – that, and post-production/compositing. He currently works at Platige Image, and also does some freelancing as well. While he enjoys his work, it's also time-consuming, so he tries to get away from the computer as often as possible to enjoy the world. http://azazel.carbonmade.com/

eltazaar@gmail.com

Eric Ennis

26-year old self-taught digital artist in Paris, France, Eric saw *Tron* as a child and decided then that 3D was the way to go! He began learning LightWave 4, later moving onto 3ds Max 3. He started out in videogames, working for various companies in Paris, and then moved to England to join Realtime UK, before joining BUF Studio in Paris.

www.eric-ennis.com

contact@eric-ennis.com

ERIC ZHANG

As a graduate from Vancouver Film School, Eric now works at Image Engine Vancouver as a modeller. He started using 3D because he admires people who make realistic 3D images. He still remembers the first 3D character he made – even thought it though it was ugly, He knew that one day he would become a 3D artist.

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CESAR DACOL JR.

Cesar Dacol Jr. has worked in the film industry for over 20 years, having started his career in the makeup effects industry and moving to computer effects in the mid 90's.Currently he works as a Director of Character Development for the feature film industry, and has worked on films such as 300, Barnyard and Fantastic Four.

http://www.cesar-dacol-jr.com/

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WOULD YOU LIKE TO CONTRIBUTE TO 3DCREATIVE OR 2DARTIST MAGAZINE?

We are always looking for tutorial artists, gallery submissions, potential interviewees, 'making of' writers, and more. For more information, please send a link to your portfolio, or send examples, to: simon@3dtotal.com

Yetty | Martin Mayer

ANIMATION & VISUAL EFFECTS IN 2009

A VFS RETROSPECTIVE

2009 represents a special milestone for graduates of Vancouver Film School's Animation & Visual Effects programs.

They contributed to 9 of the 10 highest grossing films of the year. For 10 straight weeks during this summer's blockbuster season, audiences saw their talents on the big screen. Dozens worked on *Invictus* and *Night at the Museum: Battle of the Smithsonian*, and 20 more served on the long-anticipated *Watchmen*.

Then there was *District 9*. Over 40 alumni – including Director-Writer Neill Blomkamp and Visual Effects Executive Producer Shawn Walsh – crafted this sci-fi masterpiece. The release of James Cameron's *Avatar* capped the year in style, with a number of grads working to achieve a new standard in feature film animation.

VFS

For stories, interviews, and highlights, visit **vfs.com/highlights**.

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Artwork by Dax Pandhi
(www.quadspinner.com)
created with Vue 8 Infinite.
Original tutorial appears in
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Cesar Dacol Jr.

"…I believe we have to fail in order to progress. That, after all, is the meaning behind learning."

An artist of great talent and passion for the industry that he works in, Cesar Dacol Jr. is a guy who needs little introduction; he is well respected by peers and artists alike. Being a director of character development for the feature film industry, his skills and time are much sort after, but we managed to have a quick chat with Cesar in our latest 3DCreative interview.

AN INTERVIEW WITH CESAR DACOL JR.

Hi Ceser! Now reading your bio on your website, I noticed that you started out as a make-up effects artist. Could you tell us what inspired you to take this career path and also how it lead you into computer graphics?

Indeed, make-up FX was the beginning of my journey. I have to say that in some ways I miss the purity of those days. Moving away from make-up was not an easy choice. It began with the watching of *Jurassic Park*. I'm sure most remember where they were when they experienced the dinosaurs for the first time. I quickly realized that I could not do what I was seeing on screen. It was a few more years before I was finally ready and also had come to terms with the fact that I was now the dinosaur. So I headed back to school, Sheridan College, and I suppose the rest is history.

"I'VE NEVER BEEN TECHNICALLY MINDED, HENCE BEING AN ARTIST."

So how did you fare switching between the different mediums?

Yeah, switching was tough. I knew nothing about computers. Coming in and having to learn about systems and new languages like Unix was not easy. I've never been technically minded, hence being an artist. But I have to say the support structure in place at Sheridan College really helped me greatly. Moving into the job force was also quite a culture shock. When you go from hanging out on set in the film industry to an office environment it gets interesting.

Having worked traditionally and digitally, which do you prefer?

Oh no fair. Both have their ups and downs. Computers do tend to be much more technical than artistic; after all it's in its nature. Whereas the make-up side can have it's downs in terms of scheduling. I've seen many an artists fall by the wayside after a few runs of production. Especially on set where sometimes you can have months of 22 hour days. Thankfully programs like ZBrush have brought sculpting back into the lives of the artist in the computer.

You're currently a director of character development for feature films. Could you tell us what this involves, and also what you're currently working on?

99% of what I do nowadays involves the designing of characters. The process is evolving as the industry changes. Luckily my

past experiences have allowed me to roll with the punches. As a whole the design process has now evolved to a point where the actual design can become the production asset. This is a rather new facet since we are creating the creatures directly in the computer and a digital format is a digital format. Some designers are not adept at the actual production language. But there are a few like myself who come from that background and who are able to design and deliver a production-ready asset for rigging.

In general the process hasn't changed much. A director, producer or art director, will contact you about a particular film they have. A treatment, script or verbal description will be given. Sometimes even preliminary sketches will have been created. It's then my job to translate the verbal language into a 3D representation of the character or creature. This will usually start with 2D sketches and then transition into 3D. I've recently accepted a senior position at George Miller's (*Mad Max*), Dr.D Studios in sunny Australia. Lots of greatness on the go, but as you know unfortunately NDAs don't let me speak about particular projects at the moment.

"I TEND TO WAKE UP EARLY. I FIND I AM MOST CREATIVE WHEN I GET UP; LOTS OF VIVID IMAGERY TENDS TO COME MY WAY."

So what's a normal day like for you?

That's what I like about my job: everyday is a new challenge. I tend to wake up early.
I find I am most creative when I get up; lots of vivid imagery tends to come my way. So most of my designs are done at this time. The rest of the day is usually spent spread between meetings, putting out fires and actual sculpting. The most fun for me is the sculpting portion; it's where the world drops away and I have a conversation with the character. It's very much a Frankenstein syndrome, breathing life into something that doesn't exist.

I like how you put that, and I guess it's so true. So is there anything that you've created in your time as a make-up artist that you would like to give the digital treatment?

Oh lots of things - mostly the mech stuff. One thing that I've always been enamoured with are legends and lore. In particular, legends that involve well-established archetypes like the Yeti or Bigfoot. Years ago I created a Bigfoot for a feature film called, *Beyond The Myth*. I had always imagined him moving in a certain way and although the performance was okay, it never lived up to what I imagined it could have been. I think a hybrid of the two could be a lot of fun and hope to have the chance to do produce in the future.

"WHAT WE DO DOES NOT CURE THE WORLD OF ITS ILLS. IT'S ESCAPISM FROM OUR DAILY LIVES, ENTERTAINMENT FOR THE SOULS, BRAIN CANDY."

It's nice when big name artists give back to the community, whether in terms of forum feedback or tutorials/training, and this leads me to my next question. What was the draw for you in doing your CG workshop and all the other training materials that you've produced over the years?

I love teaching. Simple... there's nothing more rewarding than helping others achieve their dreams. In a world where so much insecurity is abound (our industry is quite horrible for this fact) people will do just about anything to get ahead, including spreading lies to try to be underhand or hurt relationships between friends. It's important to keep things in proper perspective. What we do does not cure the world of its ills. It's escapism from our daily lives, entertainment for the souls, brain candy. Full of calories yet ultimately empty of any real sustenance. When you understand this it's much easier to laugh off the craziness that can envelope the creative process in our business.

When I started out no one was there to help me through the hurdles. That's what I love about teaching, it's a way to help kids who want to be a part of the dream factory. It can be a very difficult proposition to open the doors as a new artist. But you also want to get in and survive, not be overwhelmed. So many burn out quickly. I believe that all should be allowed to fail; failure, after all, is the meaning of learning. You must fail in order to learn new things. Through teaching I have an opportunity to pass on some of the things I have learned over the years. Of course it is up to each individual to take what they deem useful and throw out the rest.

I know this may be a bit hard to answer, but what has been your biggest failure and what did you learn from it?

Biggest failure... I fail all the time. All the time. I'm a firm believer in it. I believe we have to fail in order to progress, that, after all, is the meaning behind learning. But if I had to pick a big failure, I'd have to say it was my stubbornness when I was much younger. If

there's one thing I could change, it would have been that. Just the ability to understand that I didn't need to know it all and that it was okay to say, "I don't know".

So when you're not slaving away in front of a computer screen what kind of things do you get up to in your spare time?

I'm in the process of starting my own production company. Like many I have aspirations of directing my own stories. It's quite exciting at the moment as there has been a lot of interest in our properties. I'm also neck-deep into another book, which will hopefully be one of my ultimate teaching materials and will be out next year. I'm also creating a DVD that should be out in the next few months.

If I can get away from the computer then I am an outdoor kind of guy. I love being outside under the stars. Fishing has also been a passion for mine since I was a young child.

All in all though, my family, wife and kids are priority number one and if I can tie them into these types of activities then all the better.

Well it's been a huge honor to chat with you and I wish you and your family all the best. One last question before we sign off: with switching from traditional to digital, have you been tempted to switch back?

Thank you very much, that's very kind of you. I have often wondered about that question. I'd love to do so and have attempted various hybrid avenues. Technology is slowly bridging the gap between the two industries and that is very exciting to be sure. I have no doubt that the future is very bright and the technology is now coming to grips with artists and their needs. It use to be all about the tech, but that has finally swung towards artistry. I can't even imagine where we will be in ten years time.

"IT USE TO BE ALL ABOUT THE TECH, BUT THAT HAS FINALLY SWUNG TOWARDS ARTISTRY. I CAN'T EVEN IMAGINE WHERE WE WILL BE IN TEN YEARS TIME."

Cesar Dacol Jr.

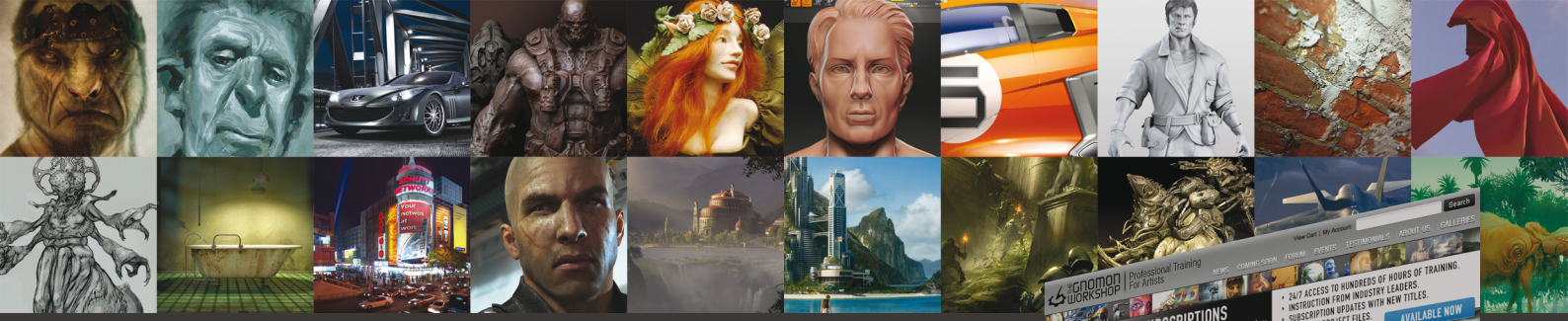
For more work by this artist please visit:

http://www.cesar-dacol-jr.com/

Or contact them at:

marcia@cesar-dacol-jr.com

Interviewed by: Chris Perrins



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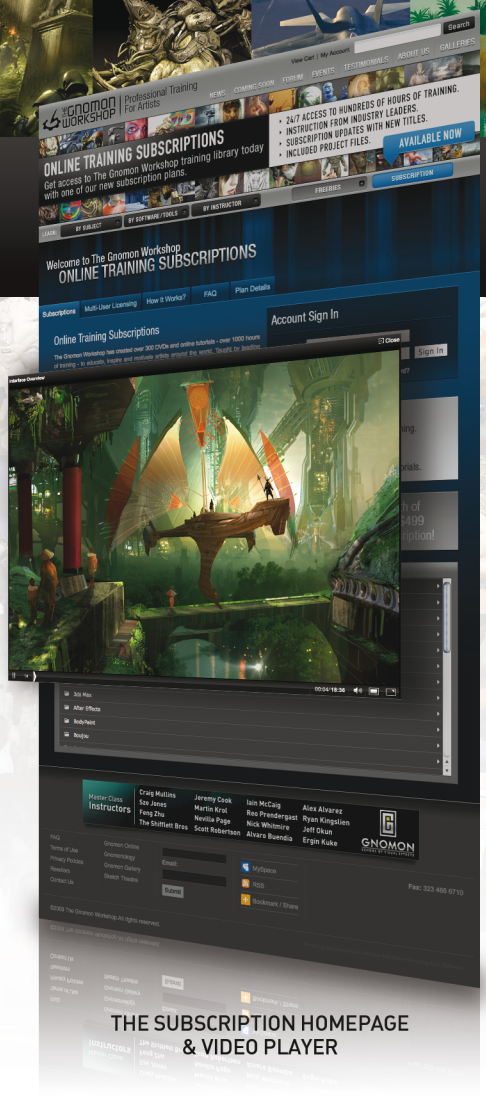

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the Gallery

This Month we Feature:

Sergey Vasilev

Rodolfo Roth

Alvydas Jaktkialo

Özcan Şener

Lino Masciulli

Martin Mayer

Mojtaba Shabanzadeh

Laurens Corijn

Cyril Taussat

Abraham Valdez

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Dead Bones Brook

Cyril Taussat

cyril.taussat@wanadoo.fr


Luxology
modo
modo is for artists

This series of five tutorials will focus on the topic of outdoor lighting and more specifically the task of setting up different light rigs to reflect a variety of weather scenarios. Each of the chapters will use the same base scene as a starting point and show a step by step guide to finding a lighting and rendering solution to describe a set time of day under different conditions ranging from a damp foggy night to sunset / sunrise.

The tutorials will explain the type of lights used and how to set up their parameters alongside the combined rendering settings in order to achieve an effective result. The manipulation of textures will also be covered in order to turn a daylight scene into night for example, as well as a look at some useful post production techniques in Photoshop in order to enhance a final still.

Follow

This month our artists will show you how to turn our seemingly boring scene into a truly dazzling environment with the Second chapter covering Sunrise and Sunset.

So if your interested in seeing the Second chapter of this amazing series, please flip to the back of this magazine and enjoy.

FOLLOW THIS TUTORIAL SERIES ON PAGE 108

ENVIRONMENT

OUTDOOR LIGHTING



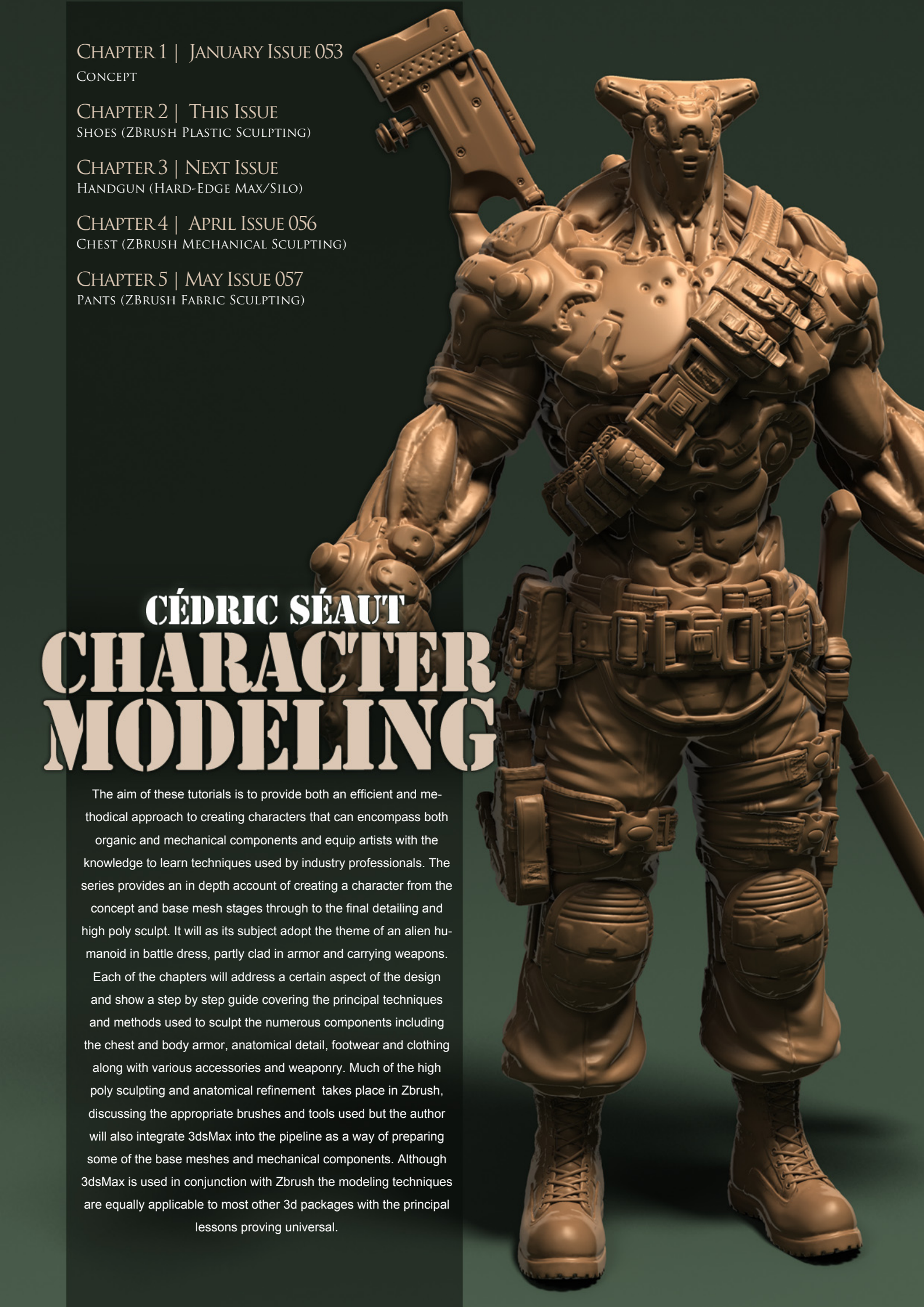
Chapter 1 | January Issue 053
Concept

Chapter 2 | This Issue
Shoes (ZBrush Plastic Sculpting)

Chapter 3 | Next Issue
Handgun (Hard-Edge Max/Silo)

Chapter 4 | April Issue 056
Chest (ZBrush Mechanical Sculpting)

Chapter 5 | May Issue 057
Pants (ZBrush Fabric Sculpting)



CÉDRIC SÉAUT
CHARACTER MODELING

The aim of these tutorials is to provide both an efficient and methodical approach to creating characters that can encompass both organic and mechanical components and equip artists with the knowledge to learn techniques used by industry professionals. The series provides an in depth account of creating a character from the concept and base mesh stages through to the final detailing and high poly sculpt. It will as its subject adopt the theme of an alien humanoid in battle dress, partly clad in armor and carrying weapons. Each of the chapters will address a certain aspect of the design and show a step by step guide covering the principal techniques and methods used to sculpt the numerous components including the chest and body armor, anatomical detail, footwear and clothing along with various accessories and weaponry. Much of the high poly sculpting and anatomical refinement takes place in Zbrush, discussing the appropriate brushes and tools used but the author will also integrate 3dsMax into the pipeline as a way of preparing some of the base meshes and mechanical components. Although 3dsMax is used in conjunction with Zbrush the modeling techniques are equally applicable to most other 3d packages with the principal lessons proving universal.

CHAPTER 2 - SHOES (ZBRUSH PLASTIC SCULPTING)

Software Used: ZBrush, 3ds Max, Silo, and Photoshop

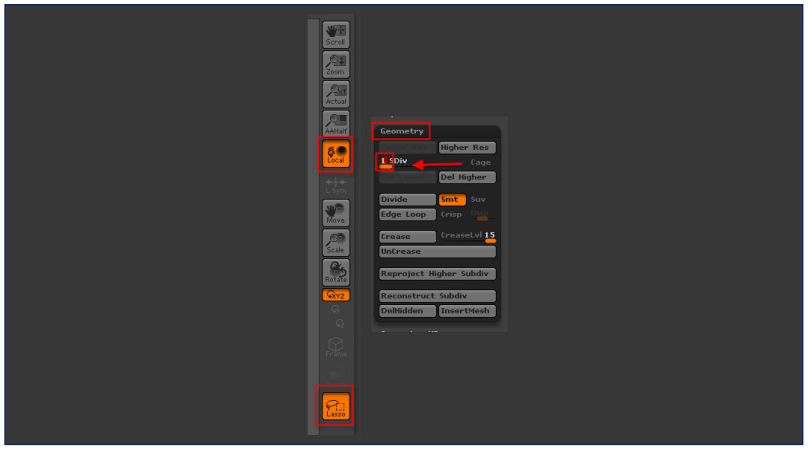
INTRODUCTION

In the following chapter, you will see the step by step progress used to create a shoe from the concept shown in chapter I.

Fig 01

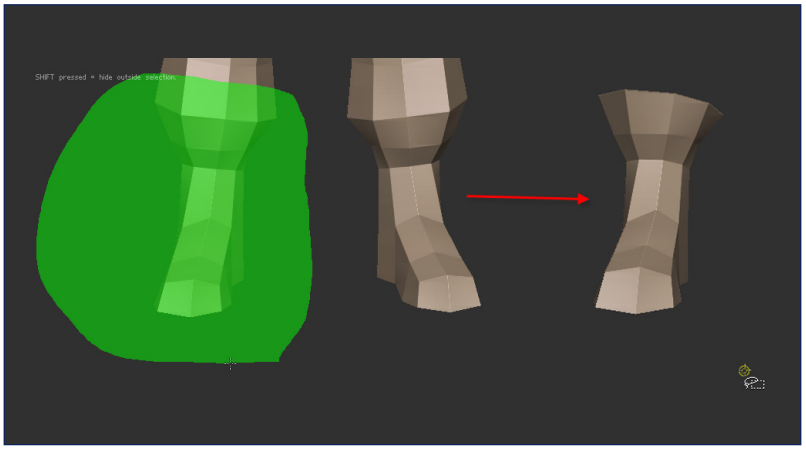
1. From the concept created in Zbrush in chapter 1. (**Fig.01**)

Fig 02



2. Some preliminary parameters to check before starting anything. Enable Local: this function will allow you to rotate around the last area you sculpted on which is very useful if you want to focus on a particular area. Enable Lasso: to activate the lasso selection mode and then change the subdivision value to the lowest level. (**Fig.02**)

Fig 03



3. With Ctrl + Shift pressed, make a selection around the right foot as shown below to isolate what will become our shoe. (**Fig.03**)

Fig 04

4. Now we are going to keep only this part to make it easier to work on. So go back to the highest level of subdivision and delete the subdivision history by pressing Del Lower. Now delete the hidden mesh and finally reconstruct your foot in order to save memory while working. (**Fig.04**)

5. Go back to the highest level. (**Fig.05**)

Fig 05

6. Divide once more; it's important because we are going to use the Polypaint function which needs vertices to be able to apply color and see an acceptable result. (**Fig.06**)

Fig 06

7. On the top menu select Draw mode and disable Zadd or Zsub as we just need the color painting function. In the Tool menu on the right under Texture, press Colorize which will switch on Polypaint. (**Fig.07**)

Fig 07

8. We are going to draw a topology on the mesh so, right click and a pop up appears. Change the draw size to get something thin enough to draw lines. In the bottom left in the color box, slide the white square to select a pure color, a purple color in this example. (**Fig.08**)

Fig 08

Fig 09

9. Just draw on the mesh to get a clean wire. (**Fig.05**)

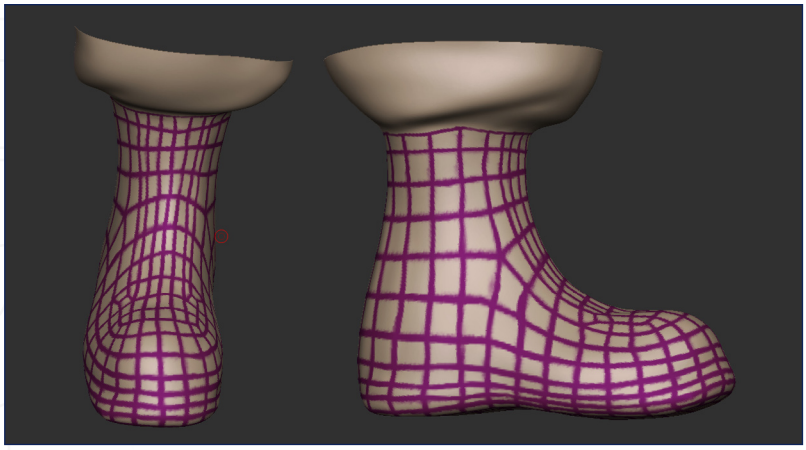


Fig 10

10. Here is a screenshot of the result. You'll see more lines at the bottom that will allow us to put more details on the sole. (**Fig.10**)

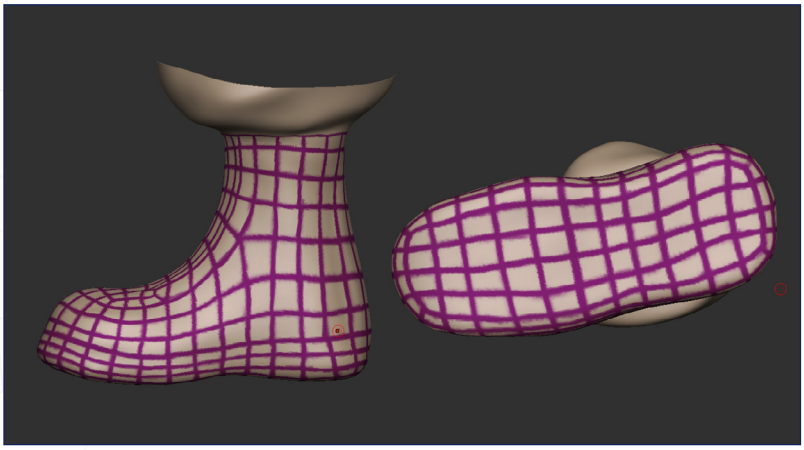


Fig 11

11. More screenshots on different angles (**Fig.11**)

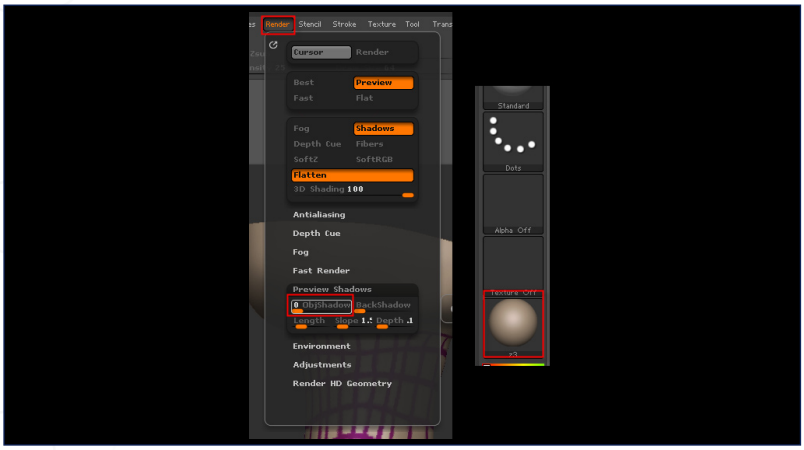
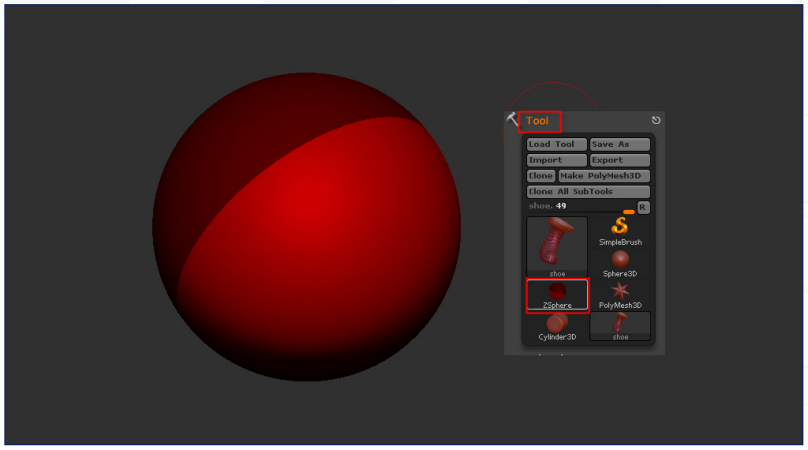


Fig 12

12. We are now going to create the new topology. Don't forget to remove the shadows and to choose the most convenient matcap for your purposes. (**Fig.12**)

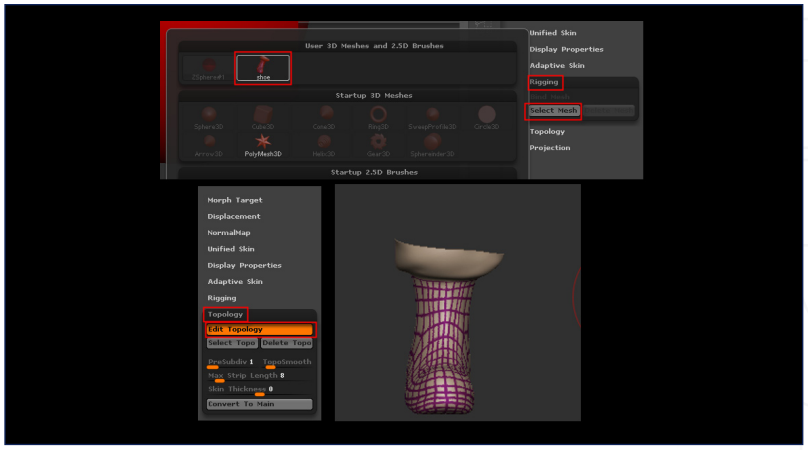
13. Create a ZSphere in the canvas by clicking on the ZSphere button under the Tool tab. (**Fig.13**)

Fig 13



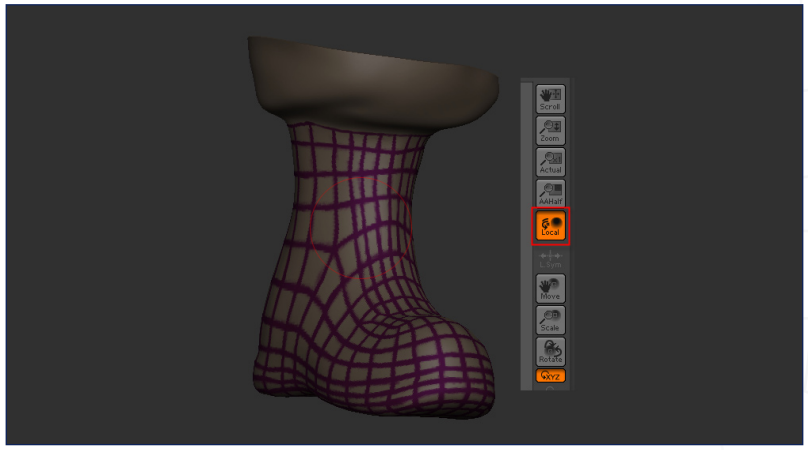
14. Still in Tool, scroll down the menu to see rigging, open it and press Select Mesh and a pop up appears. Select the shoe with the painted wire. Now open the Topology menu and press Edit Topology. The shoe now takes the place of the ZSphere in the canvas. (**Fig.14**)

Fig 14



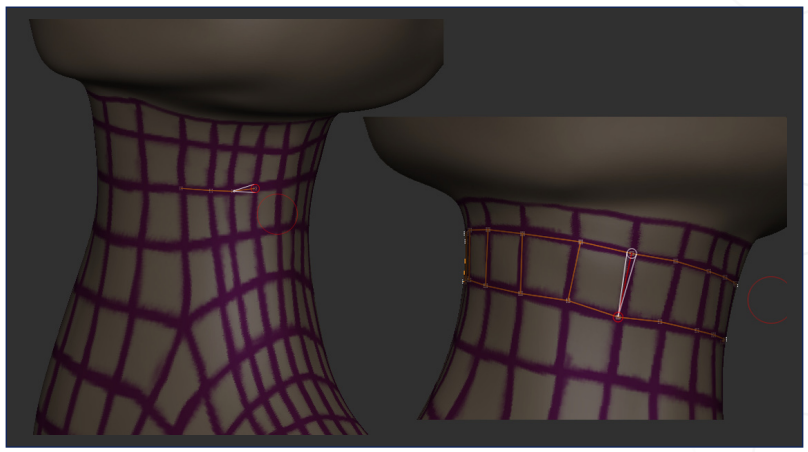
15. Before starting anything, be sure to enable Local, as it is much easier to work with this option on. (**Fig.15**)

Fig 15



16. Let's create the wire on the top of the painted one. With Ctrl pressed, click on the mesh which will mask your object and make it become darker. It can be useful to improve the wire display. Then, left click anywhere on the mesh to start the new topology.
Some pointers about creating topology:
- If you want to create a line between two vertices, select the first one with Ctrl pressed. The node will be considered as the primary one and then click on the second one.
- To remove a vertex, Press Alt and select one. This will remove all connected lines.
- To create a new vertex on an existing line, just left click on it.(**Fig.16**)

Fig 16



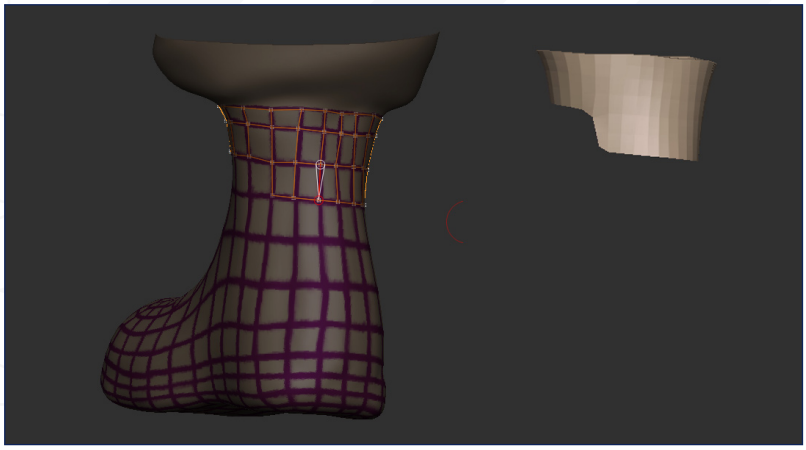


Fig 17

17. A very useful function is the ability to see a preview of the result by just pressing the A hotkey. (**Fig.17**)

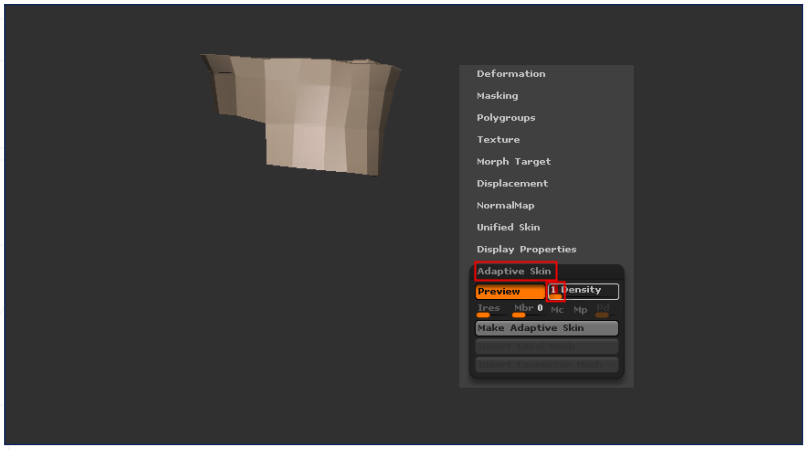


Fig 18

18. As you can see above, the preview doesn't look like the created topology, it looks subdivided. In Tool, scroll down to Adaptive Skin and change the density to 1, the preview is now right. (**Fig.18**)

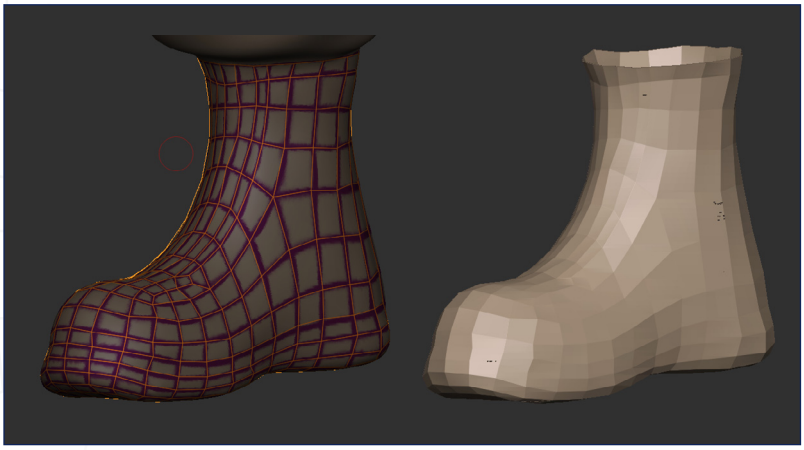


Fig 19

19. A picture with the final topology. We Polypainted it first in order to avoid mistakes and to create it faster and cleaner. (**Fig.19**)

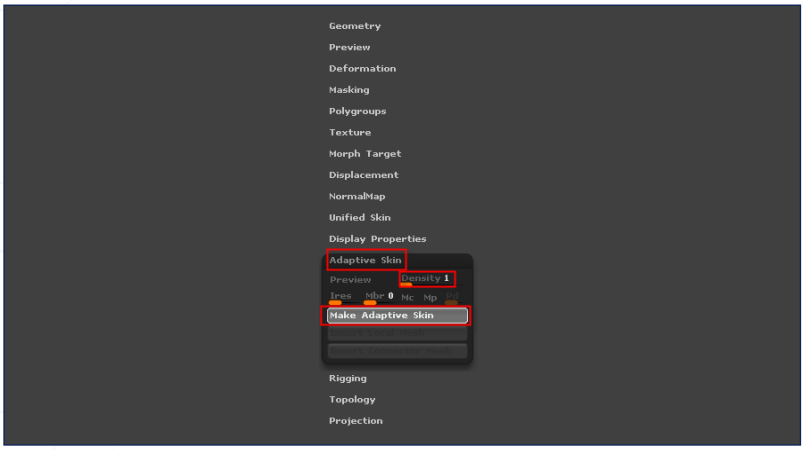
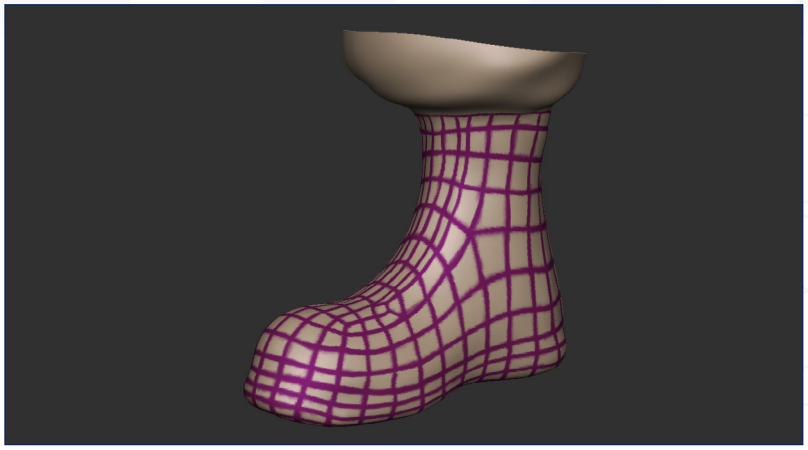


Fig 20

20. From this new wire, we are going to create and extract the corresponding mesh. Under Adaptive Skin, be sure to set the density to 1 and press Make Adaptive Skin. This will create a new tool of your mesh. (**Fig.20**)

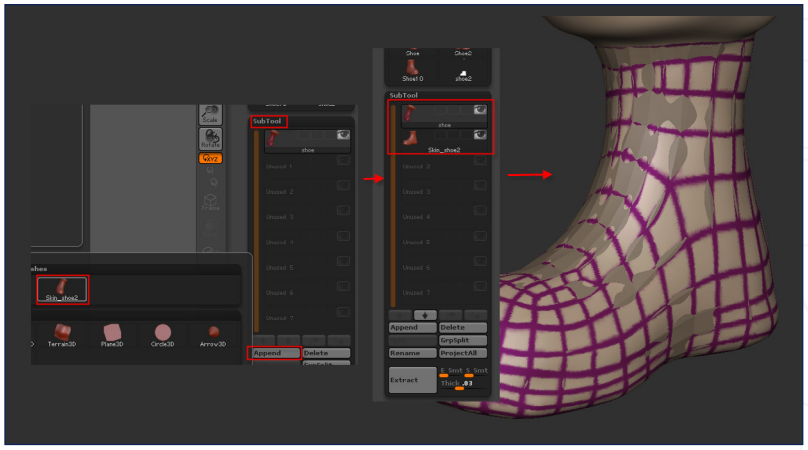
21. Go back to your original tool with the Polypainted wire. (**Fig.21**)

Fig 21



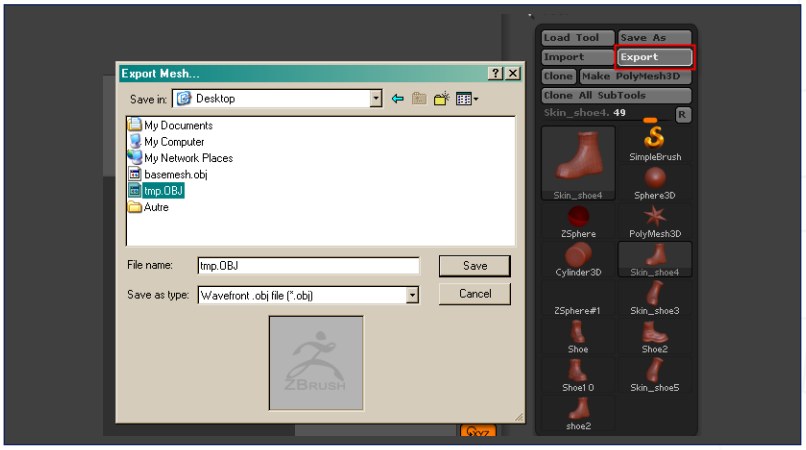
22. With Subtool menu open, click on Append and in the pop up select the mesh you've just created. We absolutely have to do that to avoid the rescaling ZBrush bug. If you export the new created mesh from its tool, the scale will be different. (**Fig.22**)

Fig 22



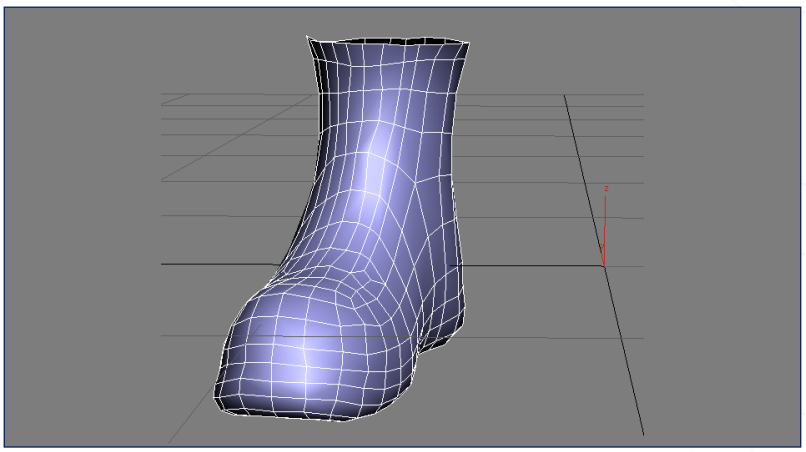
23. Select the right Subtool with your new mesh and export it. (**Fig.23**)

Fig 23



24. Import it in Max to change it a little bit. (**Fig.24**)

Fig 24



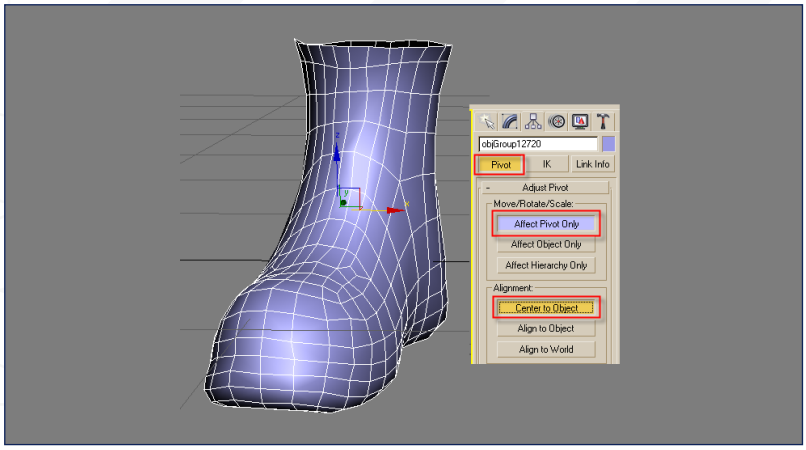


Fig 25

25. First Center the object pivot as shown below. (**Fig.25**)

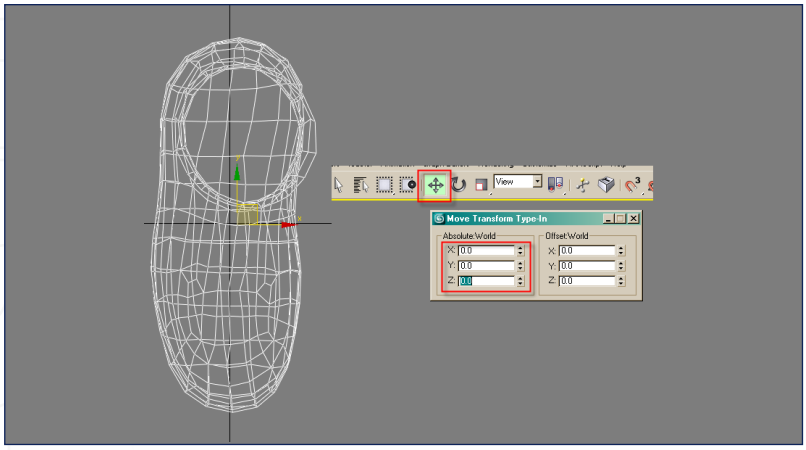


Fig 26

26. Move the shoe at the center of the scene by right clicking on the Move tool on the top bar menu and by changing the coordinates. (**Fig.26**)

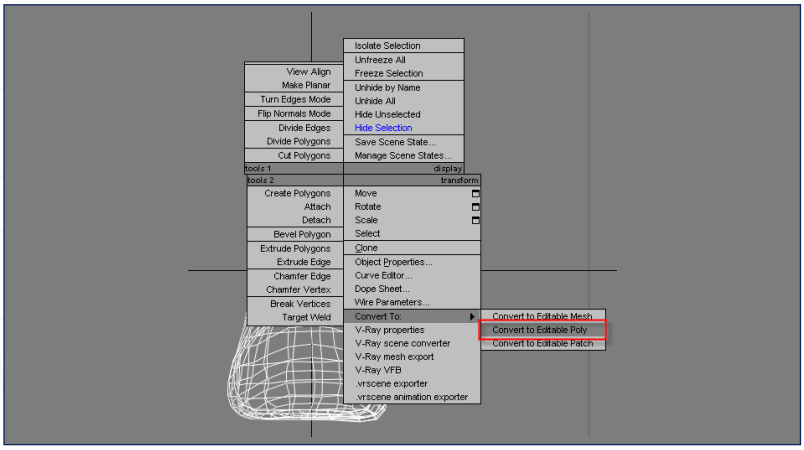


Fig 27

27. Convert it to an Editable poly to be able to make some changes on the mesh. (**Fig.276**)

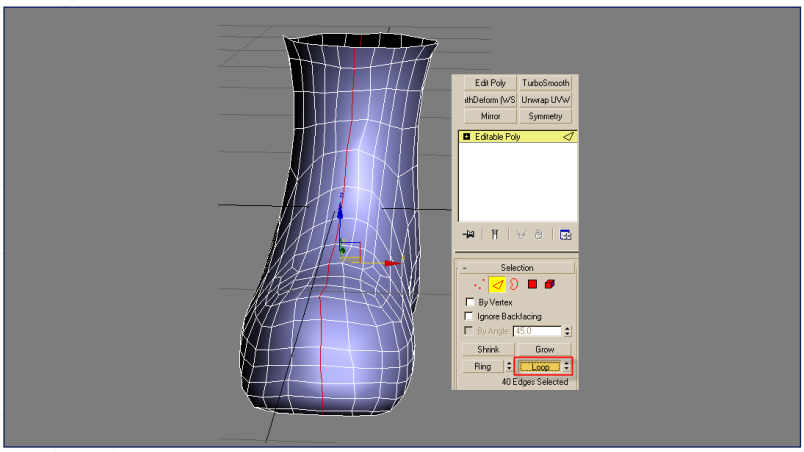
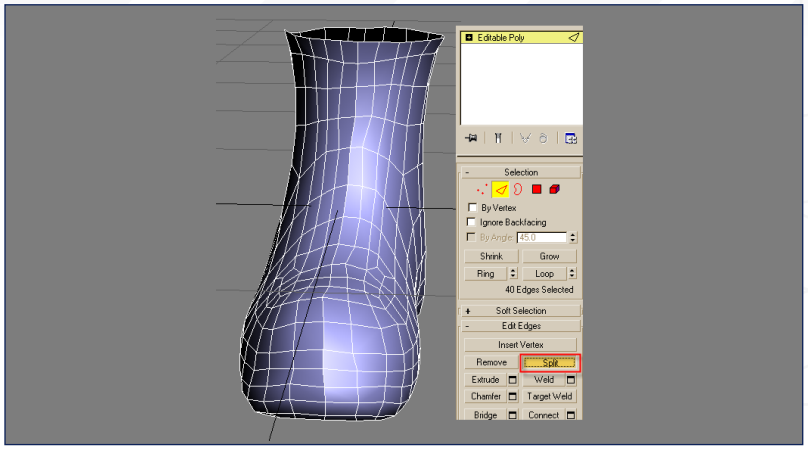


Fig 28

28. Select one edge at the middle of the mesh, press loop to select the edge loop. (**Fig.28**)

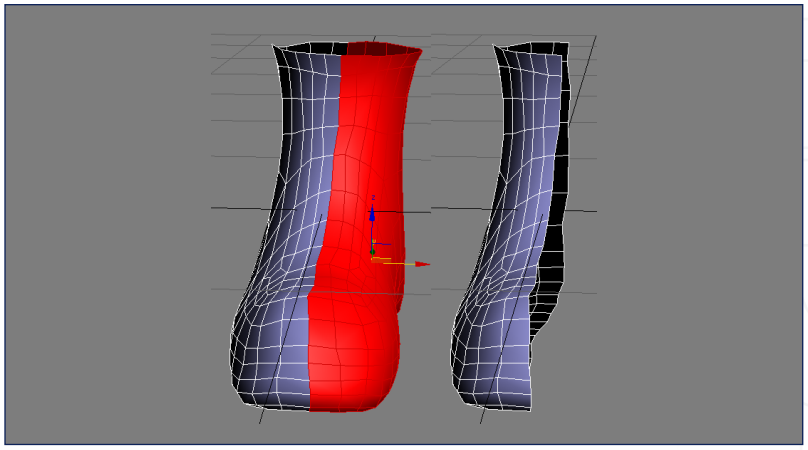
29. Press Split to disconnect both sides. (**Fig.29**)

Fig 29



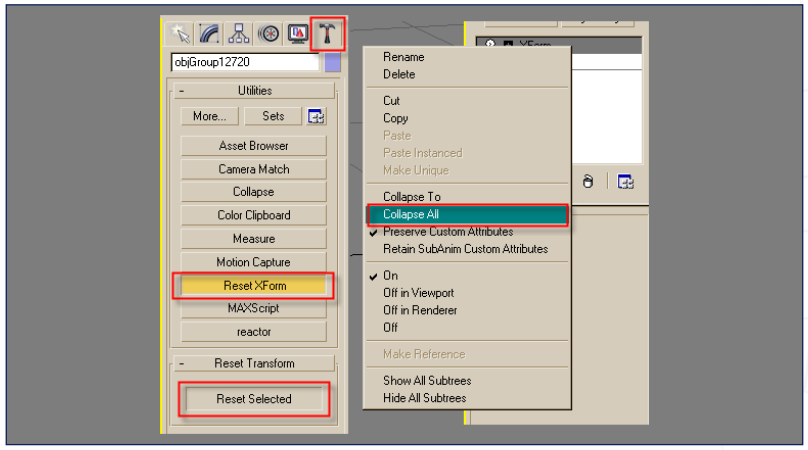
30. Select and remove the right side. (**Fig.30**)

Fig 30



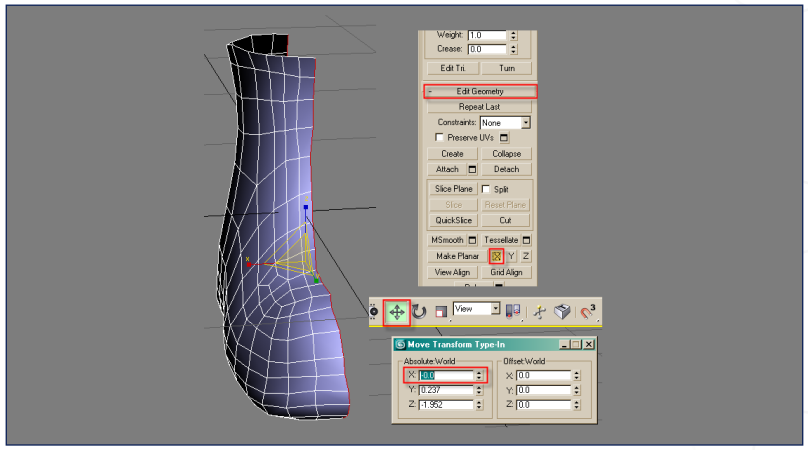
31. Under the Utility Tab press Reset Xform to remove the object history and then collapse the stack in the Modifier tab. (**Fig.31**)

Fig 31



32. Select the edge loop along the middle and make it planar along the X axis and then move it to the center of the scene by changing the X coordinate. We now have a symmetrical axis. (**Fig.32**)

Fig 32



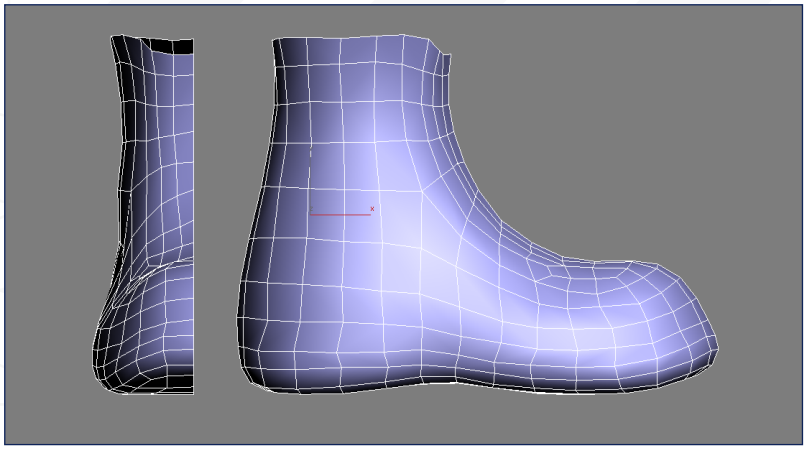


Fig 33

33. A quick preview of the shoe. (**Fig.33**)

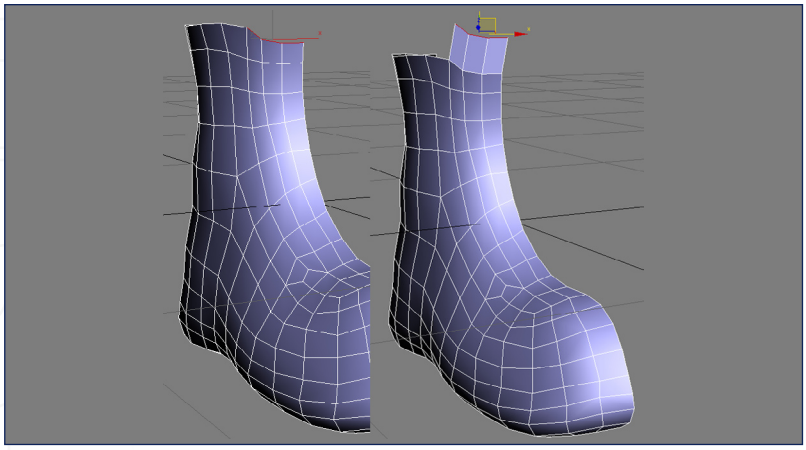


Fig 34

34. Select the 3 edges on the top and extrude them by pressing Shift and moving them at the same time. This will be the tongue of the shoe. (**Fig.34**)

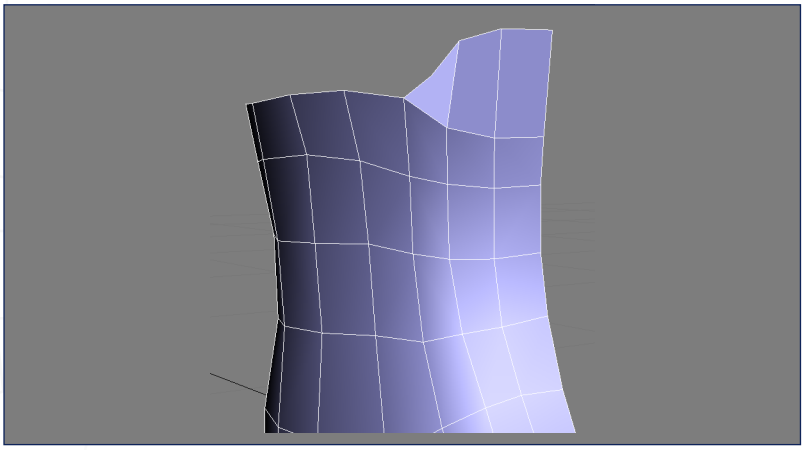


Fig 35

35. Move some vertices as shown below. (**Fig.35**)

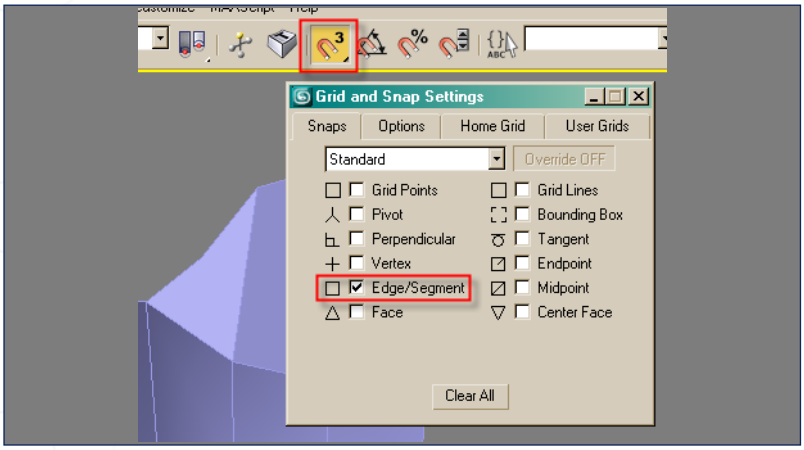
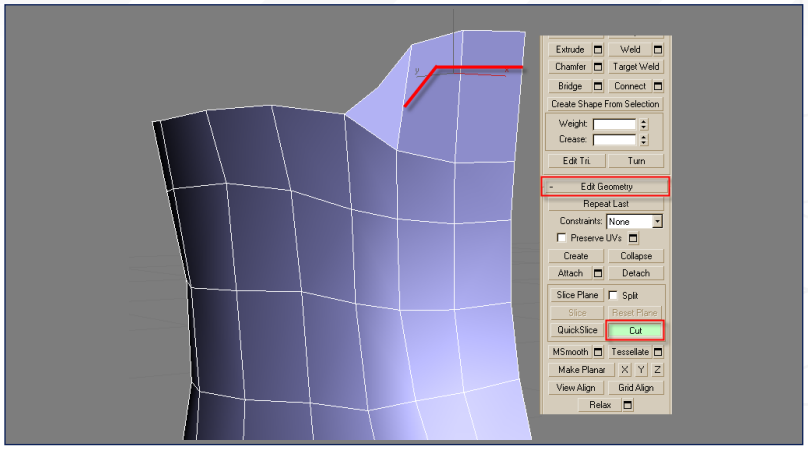


Fig 36

36. We are going to cut polygons but first change some options to make it easier. Right click on the Snap button and select Edge/ Segment only. This will auto detect edges. (**Fig.36**)

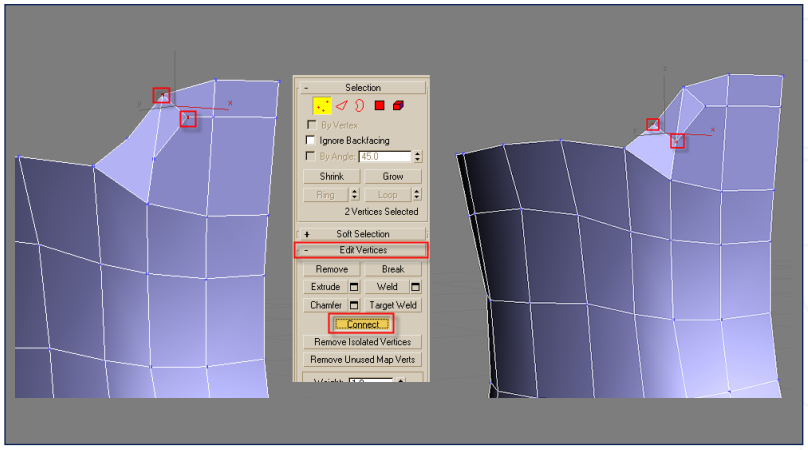
37. Press Cut and create new lines as shown below. (**Fig.37**)

Fig 37



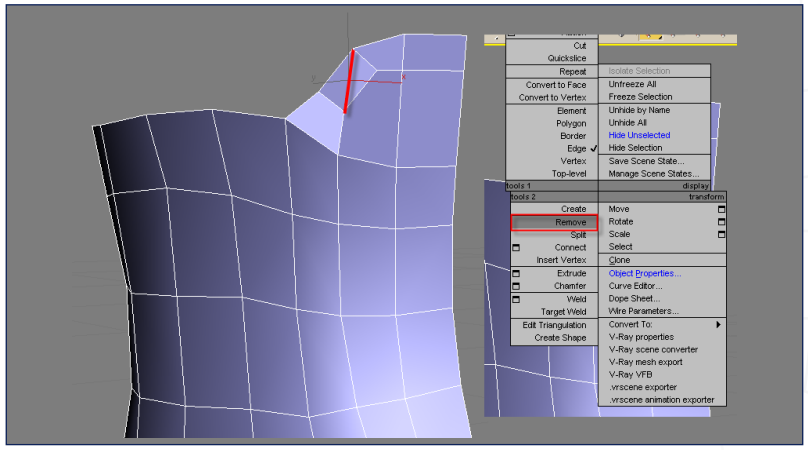
38. Connect some vertices to get a better wire. Select vertices one by one and press Connect. (**Fig.38**)

Fig 38



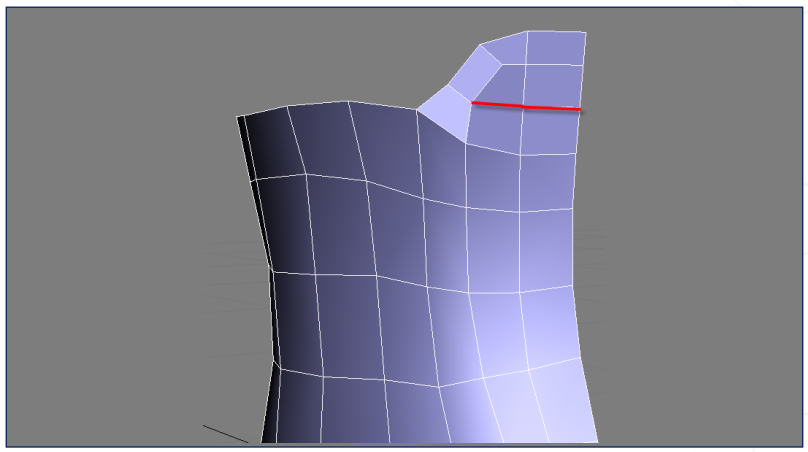
39. Remove the edge at the middle (**Fig.39**)

Fig 39



40. Cut a new line to remove rectangles and to keep only heavenly spaced quads. (**Fig.40**)

Fig 40



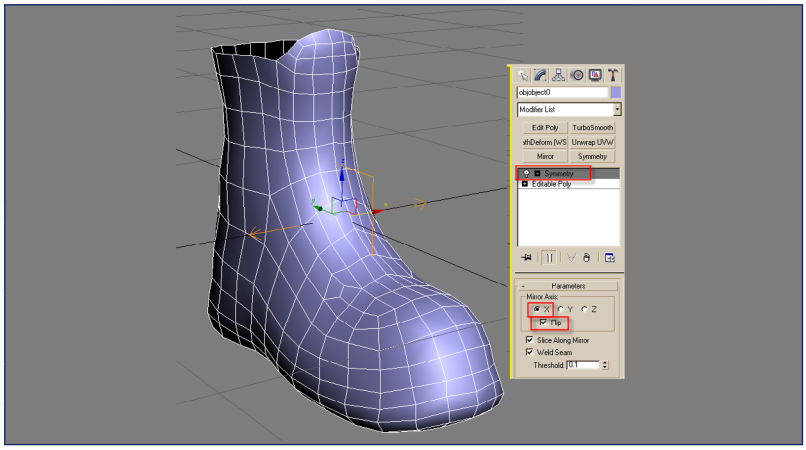


Fig 41

41. Apply a Symmetry modifier and check the parameters as shown below. As you can see, we created a symmetrical base mesh for the shoe. This technique is very useful in order to save time and to increase the quality. As soon as the shoe is finished, we will just have to put it back to the right position and to move some vertices to get closer to a real “asymmetrical” shoe. (**Fig.41**)

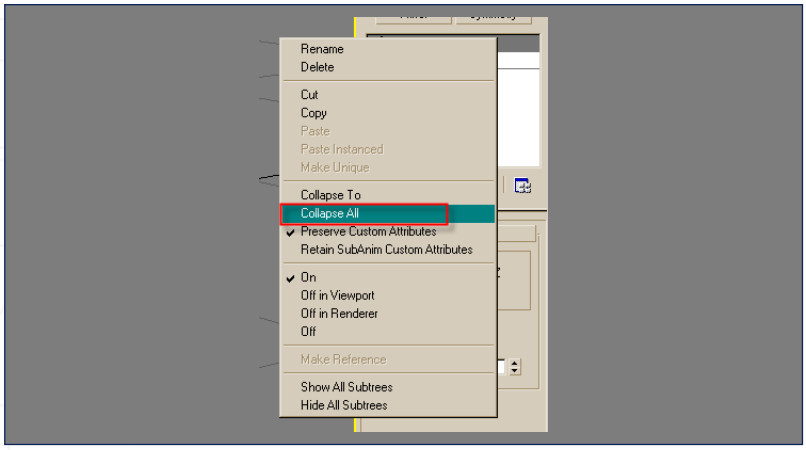


Fig 42

42. Collapse the stack modifier. (**Fig.42**)

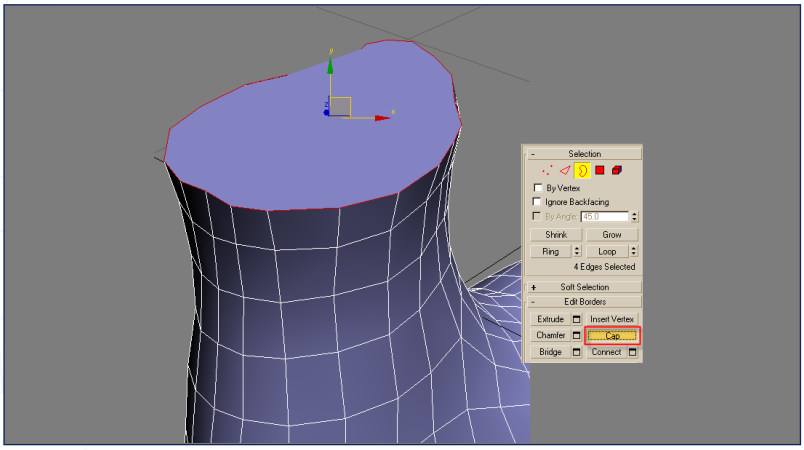


Fig 43

43. In Border mode, select the top of the object and press Cap. (**Fig.43**)

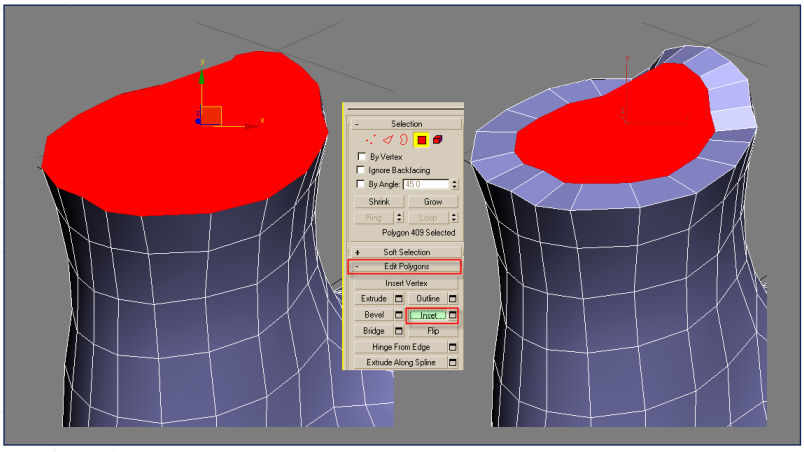
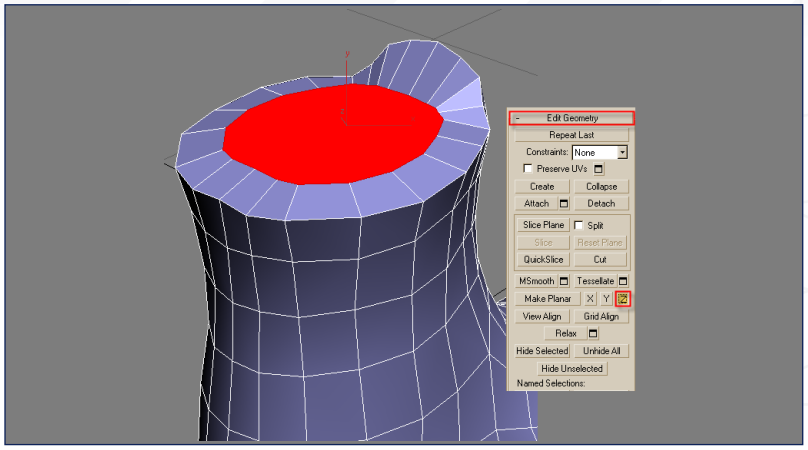


Fig 44

44. Select the big face and inset it once. (**Fig.44**)

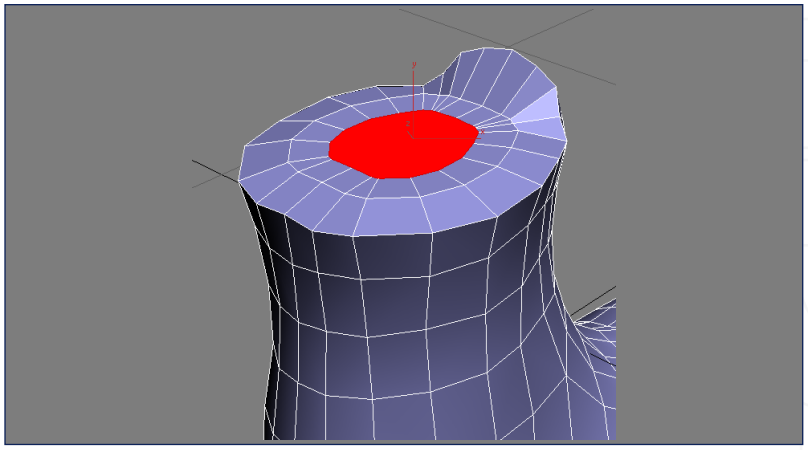
45. Make the face planar along the Z axis. (**Fig.45**)

Fig 45



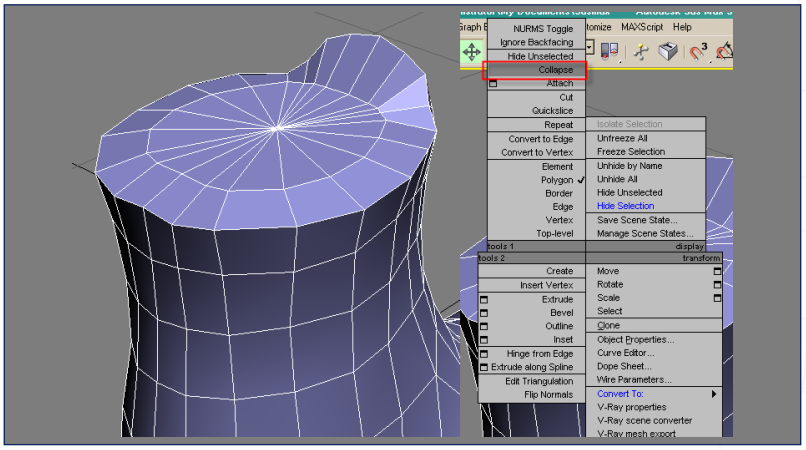
46. Inset again. (**Fig.46**)

Fig 46



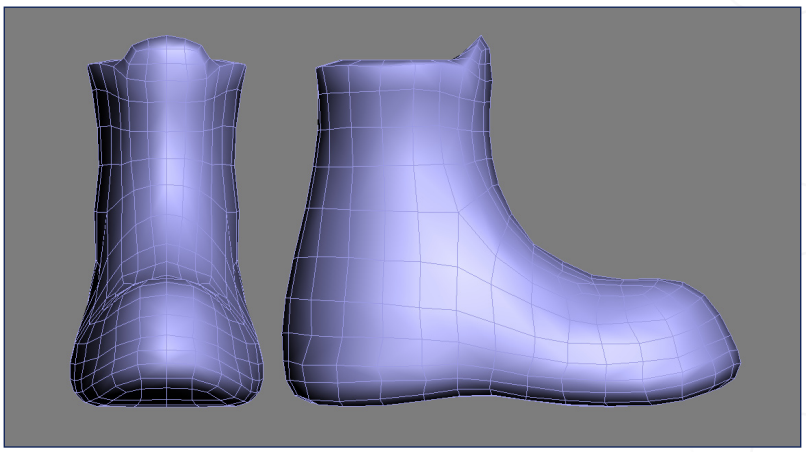
47. Now collapse it and the mesh is now properly closed. We don't particularly need to keep perfect quads on the top because it will be an hidden area. (**Fig.47**)

Fig 47



48. Here is a final preview of the shoe base mesh. (**Fig.48**)

Fig 48



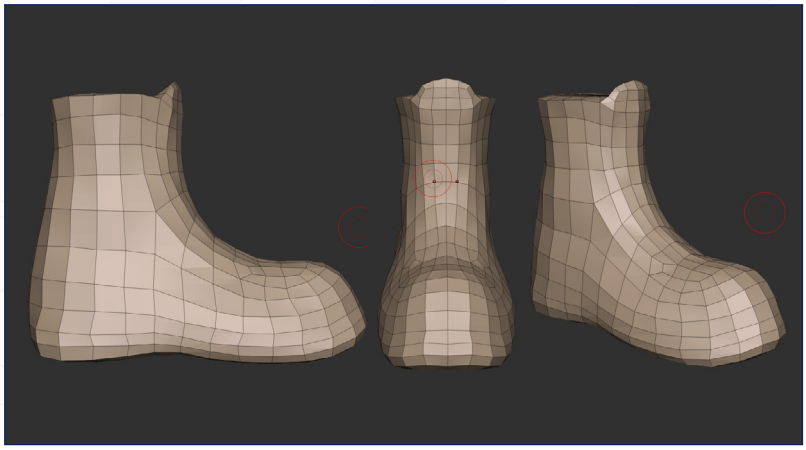


Fig 49

49. Go back to Zbrush and import the newly created base mesh. (**Fig.49**)

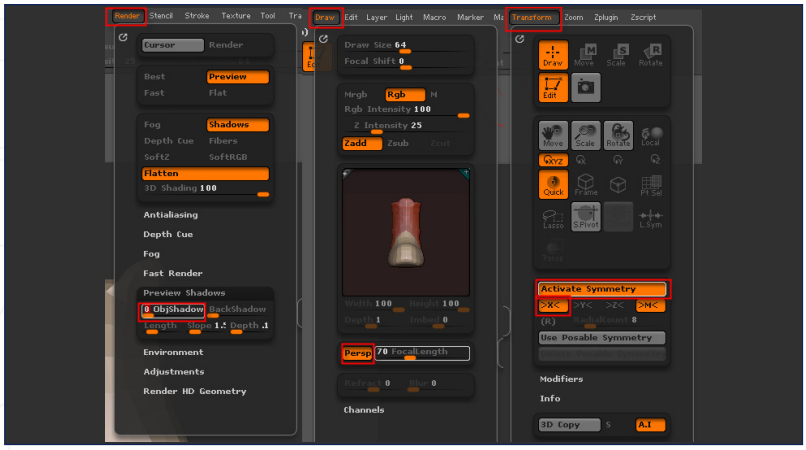


Fig 50

50. Don't forget to check some parameters before starting sculpting. Remove the real time shadows, turn on the perspective view and activate the X symmetry. (**Fig.50**)

Fig 51

51. The basic sculpt that we are going to do next will be achieved in the main thanks to the Move and Dam Standard brushes. (**Fig.51**)

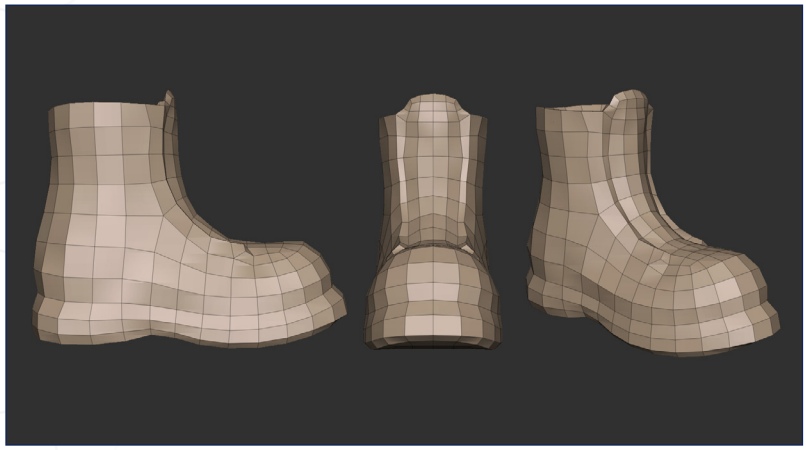
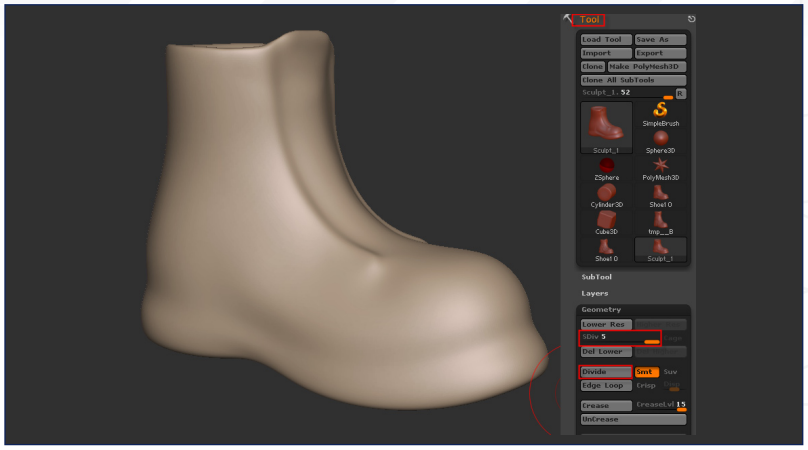


Fig 52

52. Don't subdivide the shoe but rather make the changes at the level 0 which will make it easier to get a new shape by keeping something clean and sharp. (**Fig.52**)

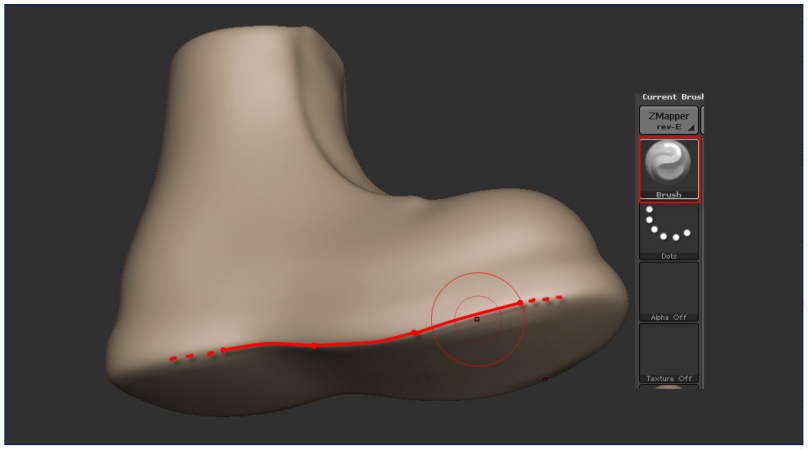
53. Now you are ready to add more subdivisions. (**Fig.53**)

Fig 53



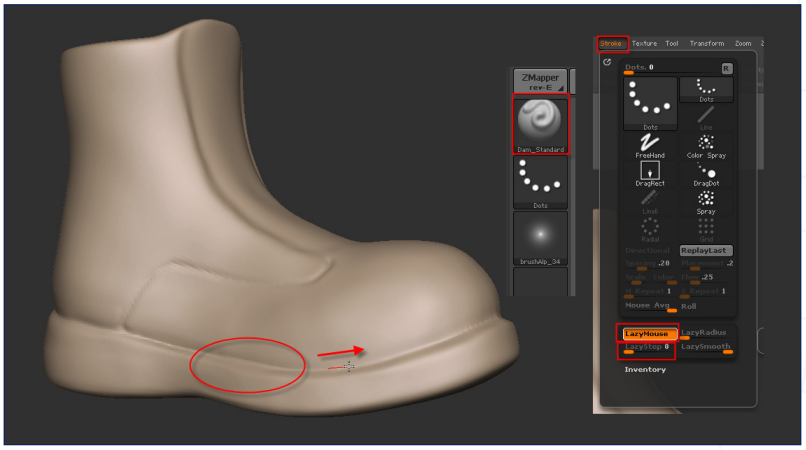
54. With the Pinch brush selected, add more definition on the sole edge just to make it a little bit sharper. (**Fig.54**)

Fig 54



55. With the Dam standard brush, go to Stroke panel, enable LazyMouse and change the LazyStep value to 0. This will allow you to make some very clean lines. Bear in mind that you still have to draw them slowly in order to get the best results. (**Fig.55**)

Fig 55



56. Select Clay brush to have sharp painting parameters. Then with Ctrl pressed paint a mask on the shoe as shown below. (**Fig.56**)

Fig 56

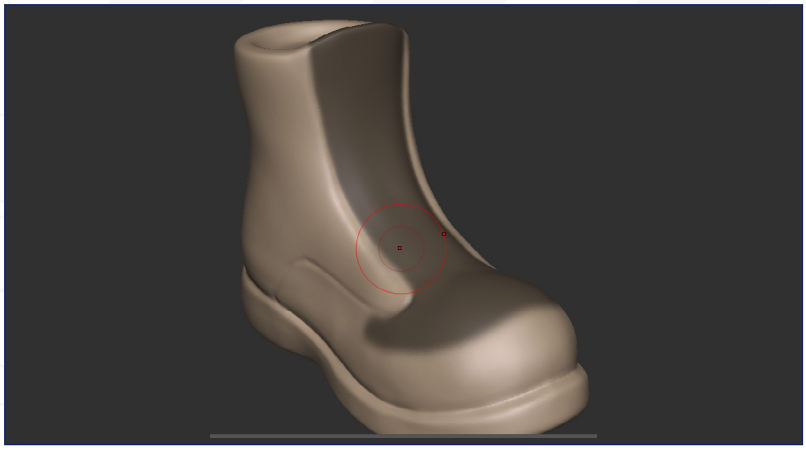


Fig 57

57. When the mask is well defined, release Ctrl. Then press Ctrl + click on the mesh to blur the mask. (**Fig.57**)

Fig 58

58. Now with the move brush, pull out the surface on each side of the tongue. (**Fig.58**)

Fig 59

59. Remove the mask. To remove it press Ctrl + drag a selection box out of the mesh in the canvas then release Ctrl and finally release the mouse. (**Fig.59**)

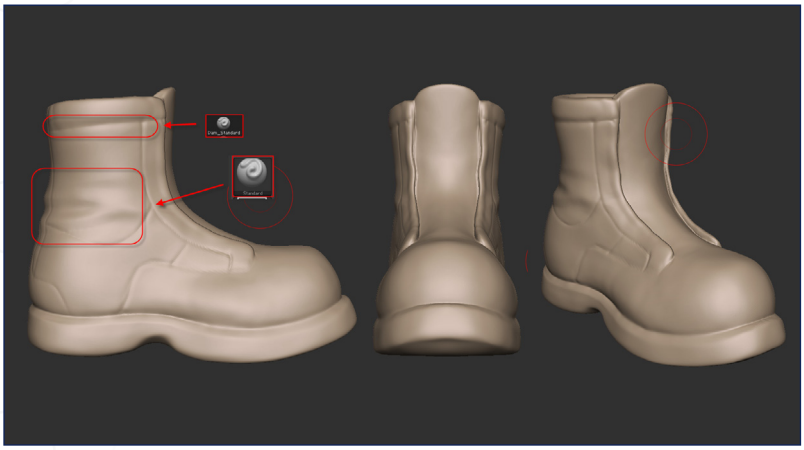
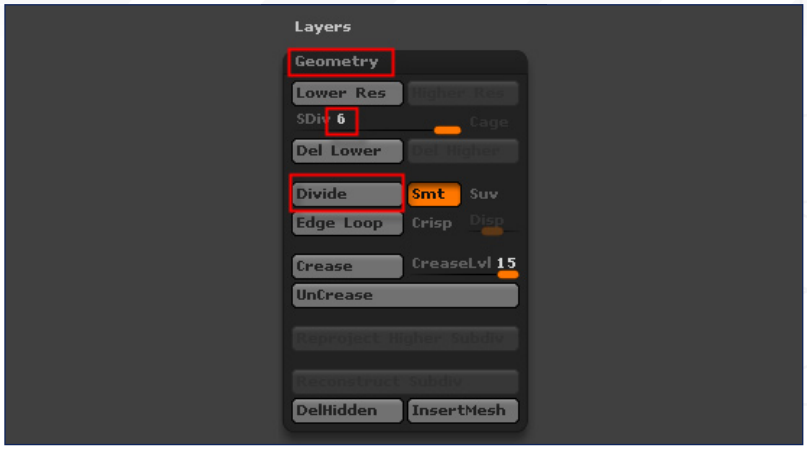


Fig 60

60. Now with Dam Standard and Standard brush, add some folds at the back of shoe to simulate some bending artifacts and add some lines to create more pieces of leather. (**Fig.60**)

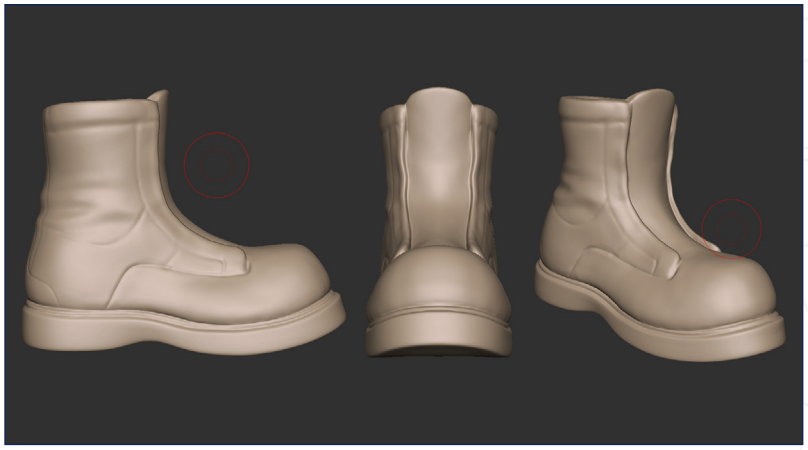
61. Divide the shoe once more. (**Fig.61**)

Fig 61



62. With the same technique explained above (see 55), add more lines to the sole. (**Fig.62**)

Fig 62



63. Now we are going to add more thickness to the different leather pieces. Select Slash 2 brush under the Stroke panel, activate LazyMouse and change the LazyStep to 0. These parameters are very important if you want to get very smooth lines. Right click to open the popup menu and change the intensity to 16. Finally add one more subdivision to increase the level of quality. (**Fig.63**)

Fig 63

64. Now you just have to sculpt slowly on the top of the lines you previously drew. Below are some screenshots of what you can achieve. (**Fig.64**)

Fig 64

Fig 65

65. More screenshots from different angles. (**Fig.65**)

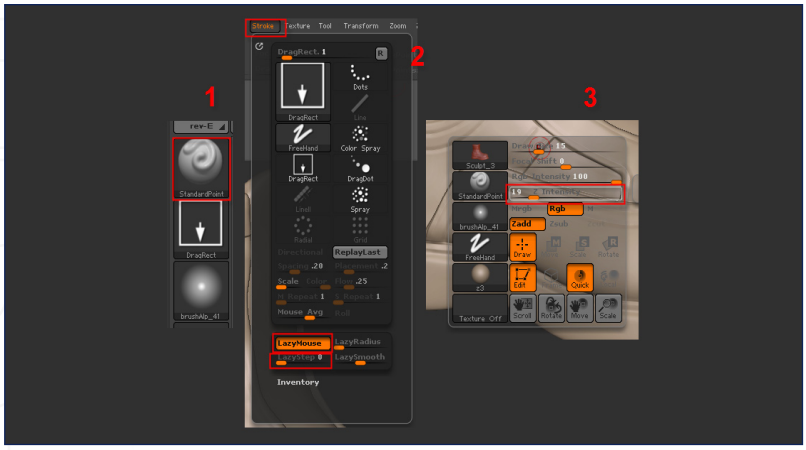


Fig 66

66. As we did for leather pieces, we are going to prepare some stitches. Select Standard point Brush applying the same Stroke changes as above and change the intensity value to 19. It's often good to keep a small value when you use Lazymouse with LazyStep at 0. (**Fig.66**)

Fig 67

67. Now draw two lines for each piece, one close to the extremity and the second one alongside it. (**Fig.67**)

Fig 68

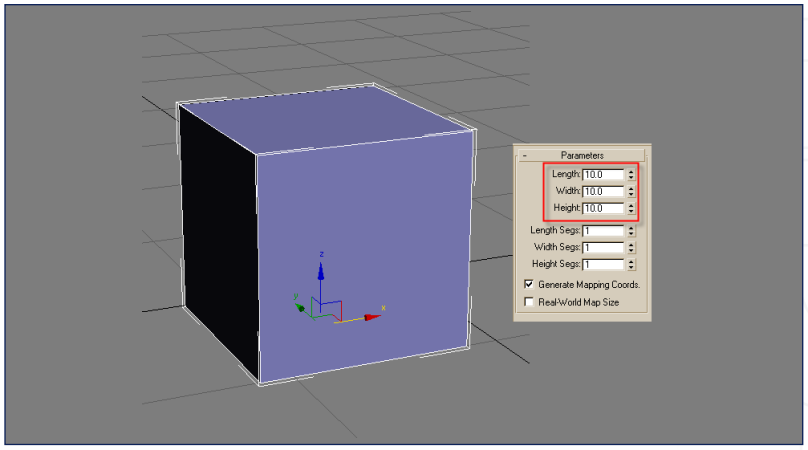
68. Select the Stitch simple brush created by my friend David Giraud and draw the stitches along the lines. (**Fig.68**)

69. A preview of what you can achieve at this stage. (**Fig.69**)

Fig 69

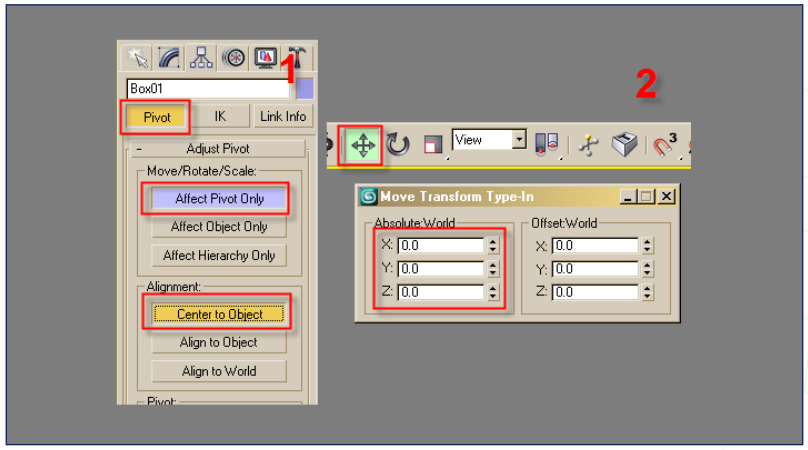
70. We are now going to create some accessories for the shoe. The next step will be to create the eyelets in max. Go back to 3ds max and create a simple cube in the scene with the following parameters. (**Fig.70**)

Fig 70



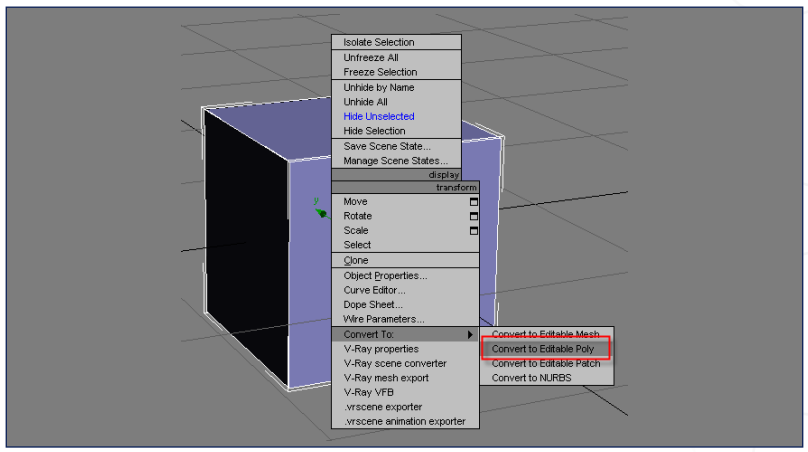
71. As you have done many times throughout this tutorial, put the pivot at the center of the object and move the object to the center of the scene. (**Fig.71**)

Fig 71



72. Convert it to an Editable poly to be able to make some modifications. (**Fig.72**)

Fig 72



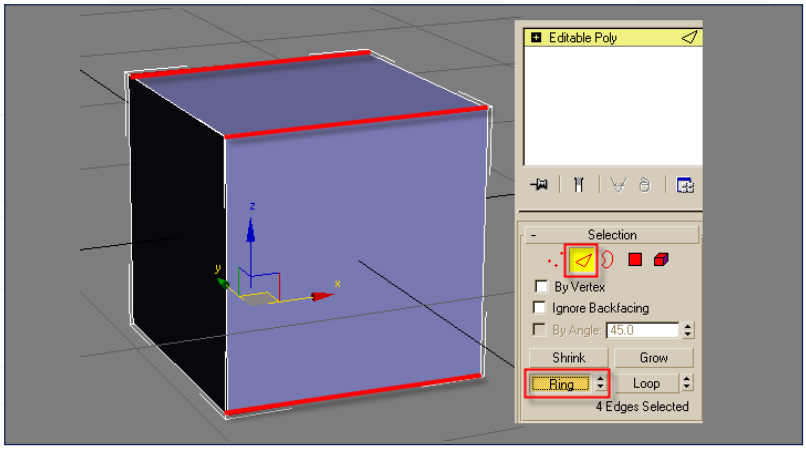


Fig 73

73. Select a horizontal edge and click on Ring to select the corresponding edge ring. (**Fig.73**)

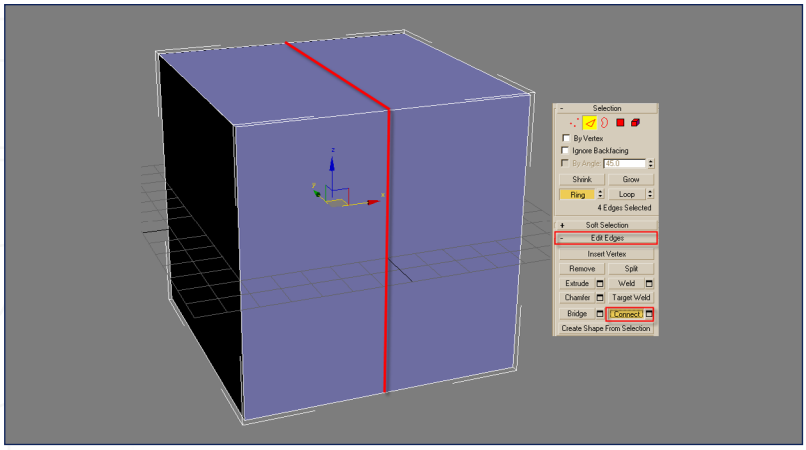


Fig 74

74. Press Connect to create an edge loop at the middle. (**Fig.74**)

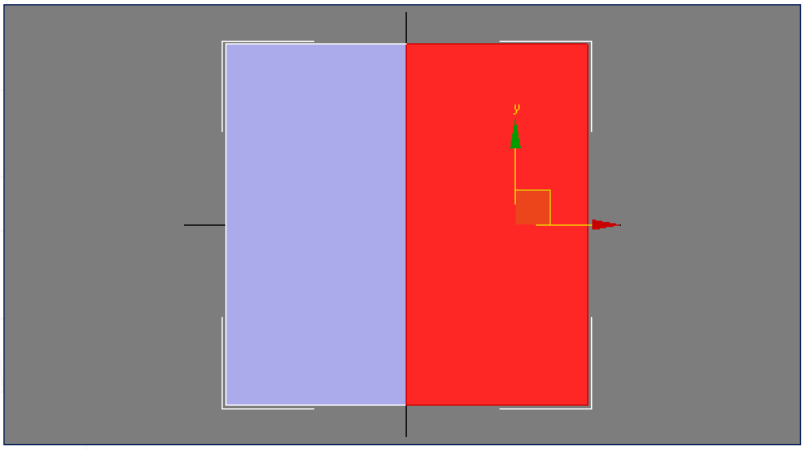


Fig 75

75. Select the right side and press delete. (**Fig.75**)

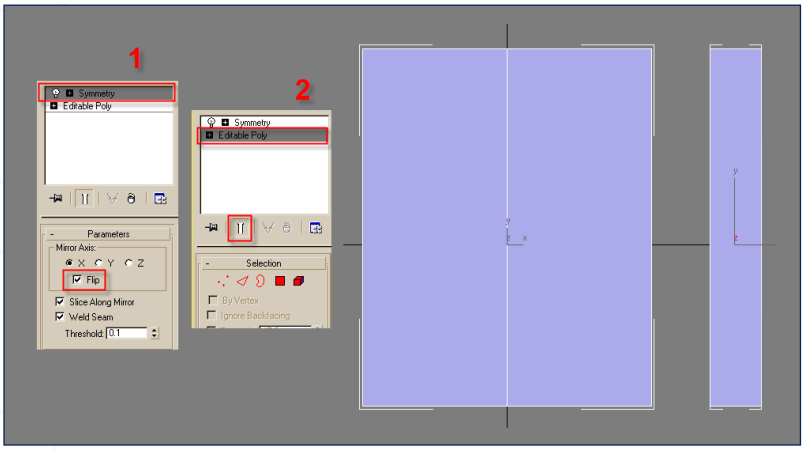
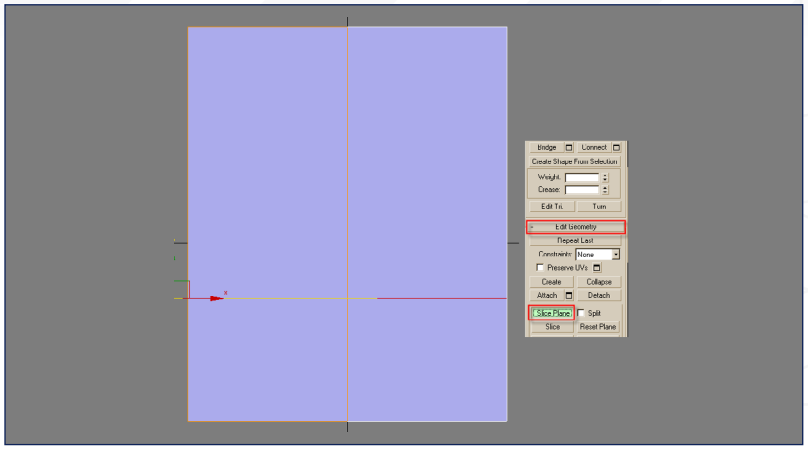


Fig 76

76. Apply a Symmetry modifier but don't forget to check Flip otherwise you won't see anything. Now go back to Editable Poly in the stack and press the White T to enable the Symmetry modifier and see the instanced right side. (**Fig.76**)

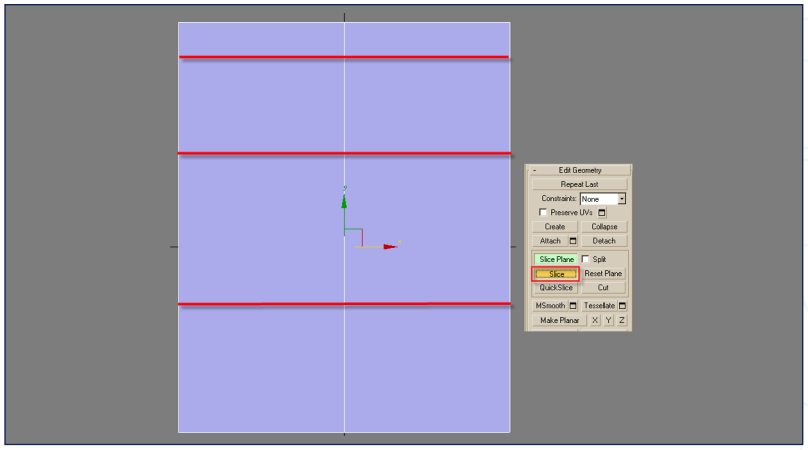
77. In the front view, click Slice Plane and a yellow edge appears that you are able to move. That will allow us to make a new section in the current mesh. (**Fig.77**)

Fig 77



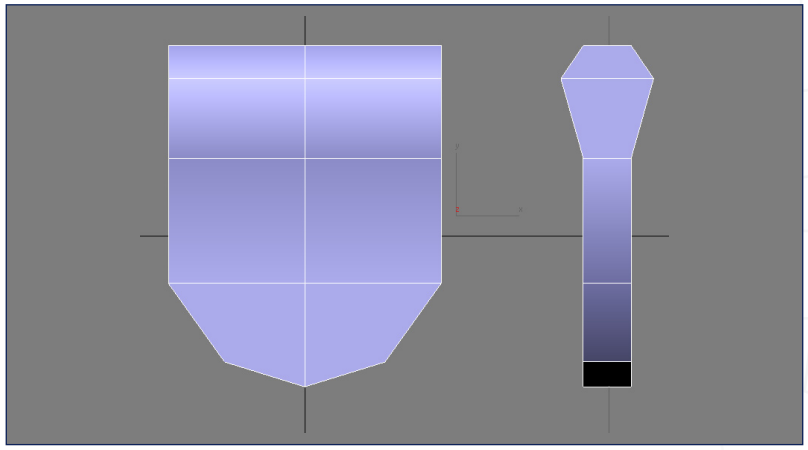
78. Using the slice plane, make three different cuts as shown below. To do this, move the plane and simply press Slice, resulting in a new horizontal edge loop. (**Fig.78**)

Fig 78



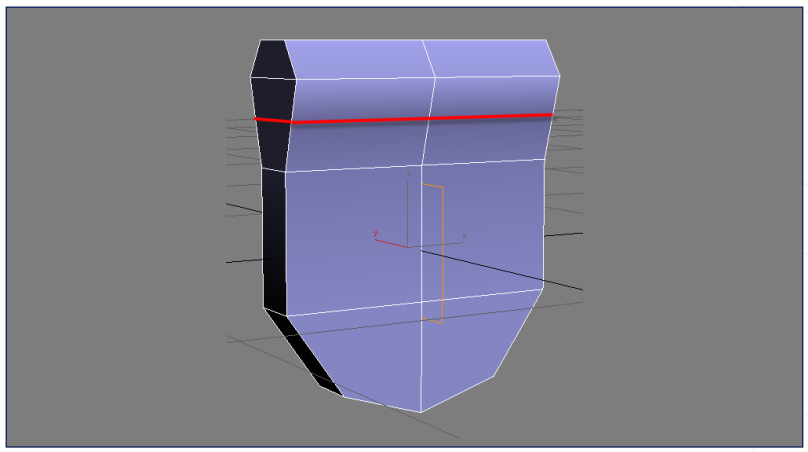
79. Still in the front view to keep in track, move some of the vertices. We define first the main shape. (**Fig.79**)

Fig 79



80. Using the same Slice Plane technique, make a new cut across the top of the object. (**Fig.80**)

Fig 80



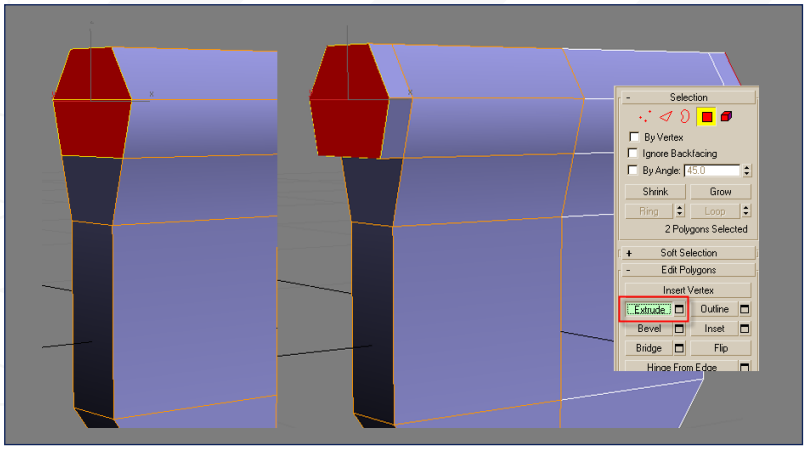


Fig 81

81. Select the faces at the extreme left and extrude them by pressing the Extrude button. (**Fig.81**)

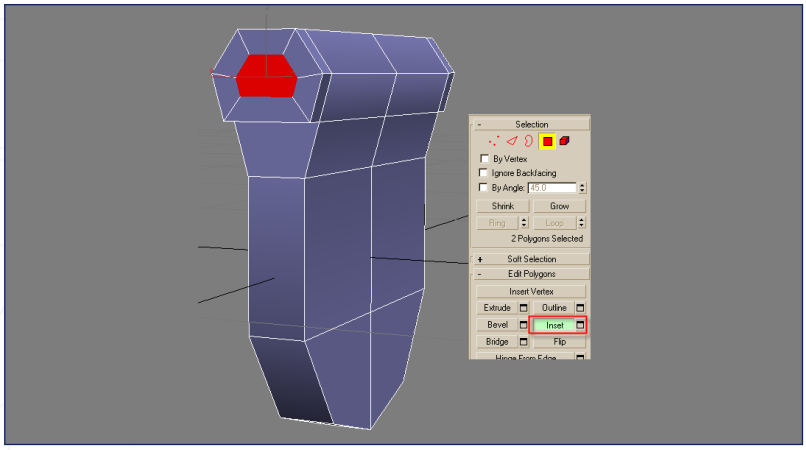


Fig 82

82. Use the Inset function to create and scale the new faces allowing us to give thickness to the object. (**Fig.82**)

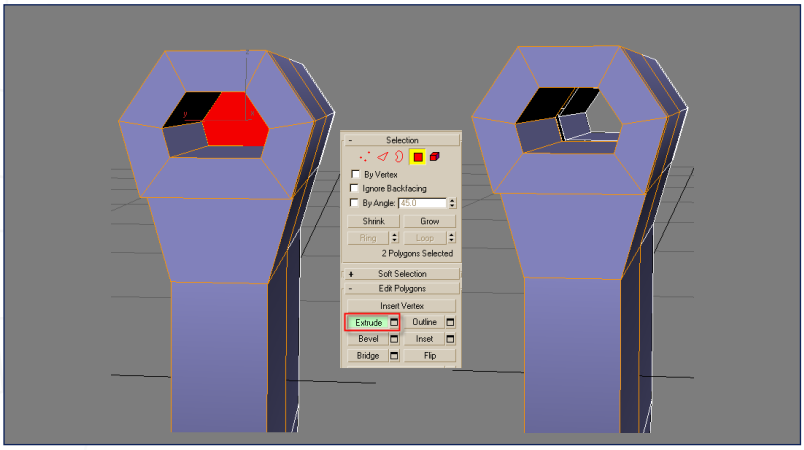


Fig 83

83. With the new faces still selected, extrude them to the inside to create a corridor and then delete them. (**Fig.83**)

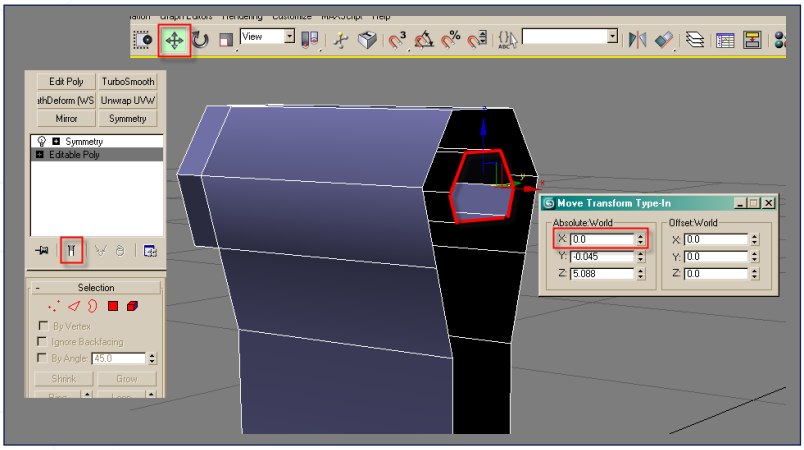
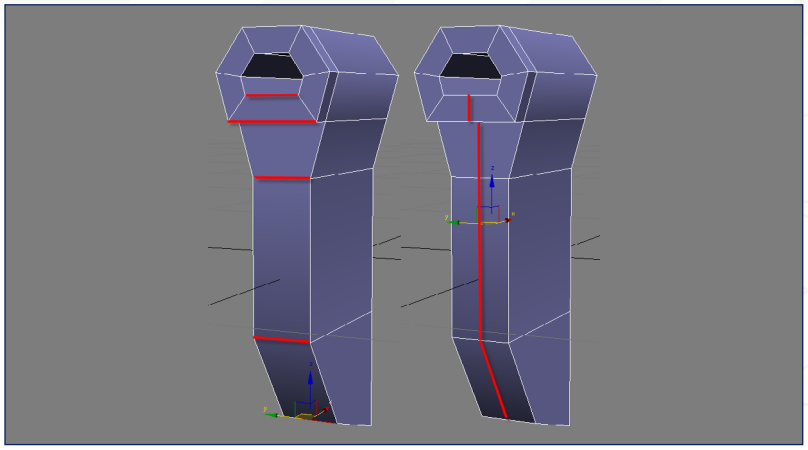


Fig 84

84. First disable the preview Symmetry modifier to be able to see the inside and then move the edges at the middle of the scene with the same technique as explained above (see 26). (**Fig.84**)

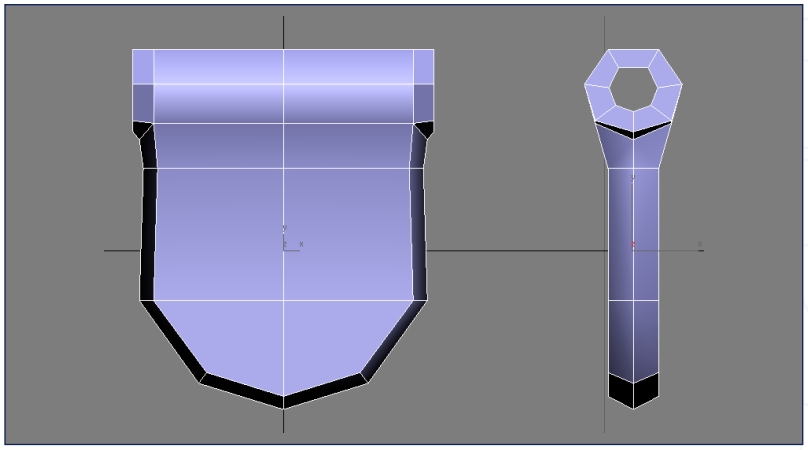
85. Select an edge on the side, then press ring Loop and finally press Connect to create a new edge loop. (**Fig.85**)

Fig 85



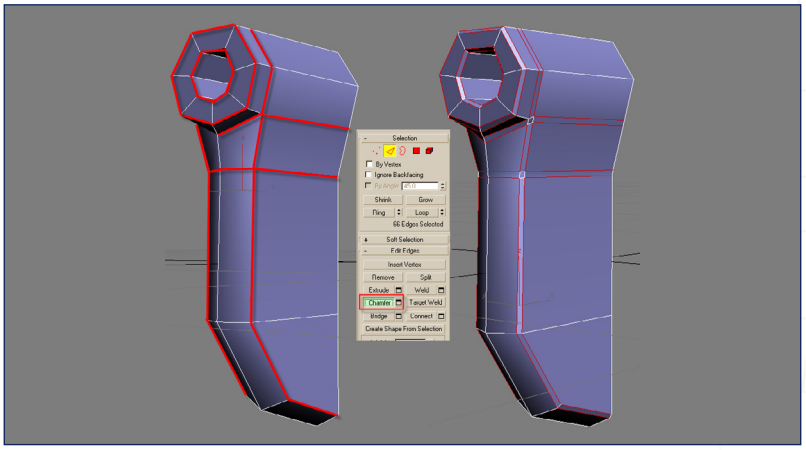
86. Here is a preview of the current stage. (**Fig.86**)

Fig 86



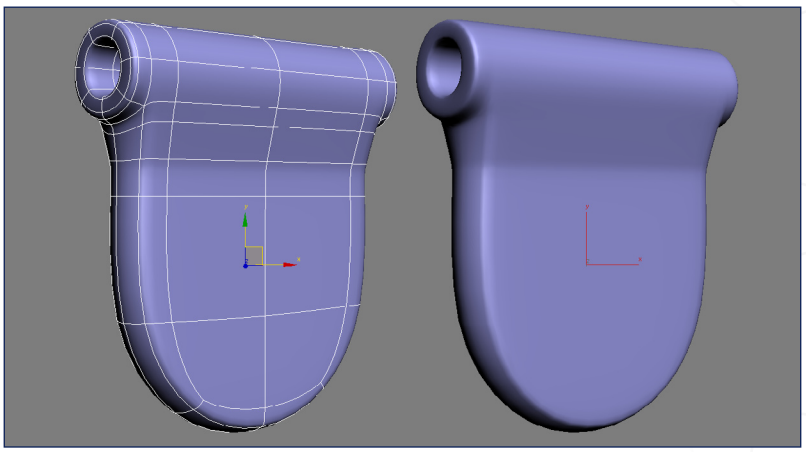
87. Select all the edges as shown below, even at the rear of the object and press Chamfer to duplicate them which will sharpen some of the lines. (**Fig.87**)

Fig 87



88. Apply a Meshsmooth modifier or a Turbosmooth modifier to see a more final preview. (**Fig.88**)

Fig 88



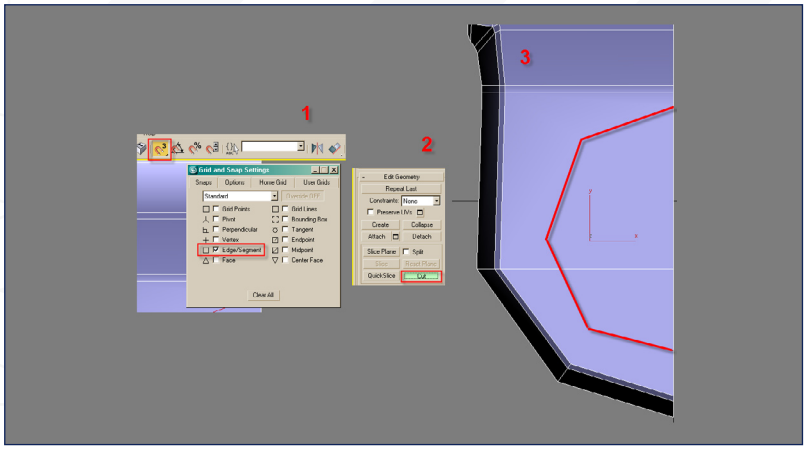


Fig 89

89. Remove the Meshsmooth modifier first, then activate the snap option and right click it. Be sure that Edge/segment only is checked. Press Cut and draw half a hexagon at the bottom of the eyelet. (**Fig.89**)

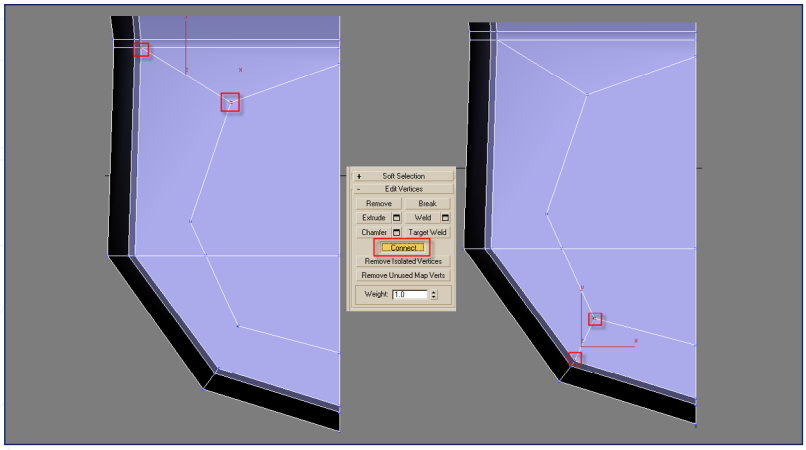


Fig 90

90. Let's now rearrange some vertices to get proper quads. Select the vertices shown below and press Connect to create new edges. (**Fig.90**)

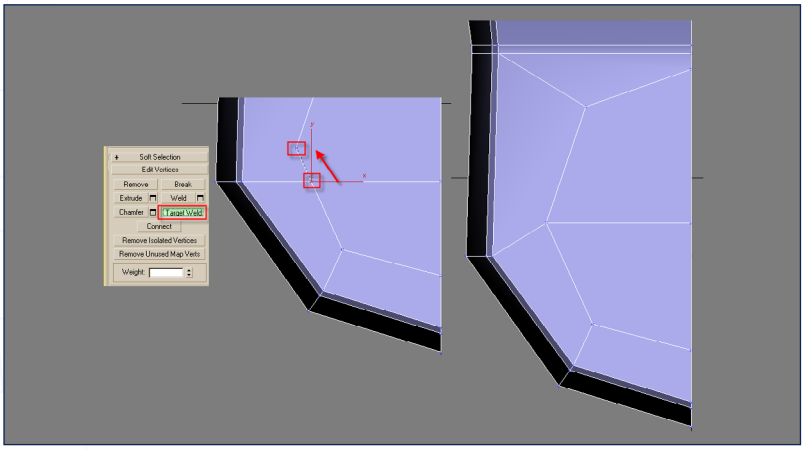


Fig 91

91. Finally Press Target Weld, and snap / collapse the first vertex with the second one. (**Fig.91**)

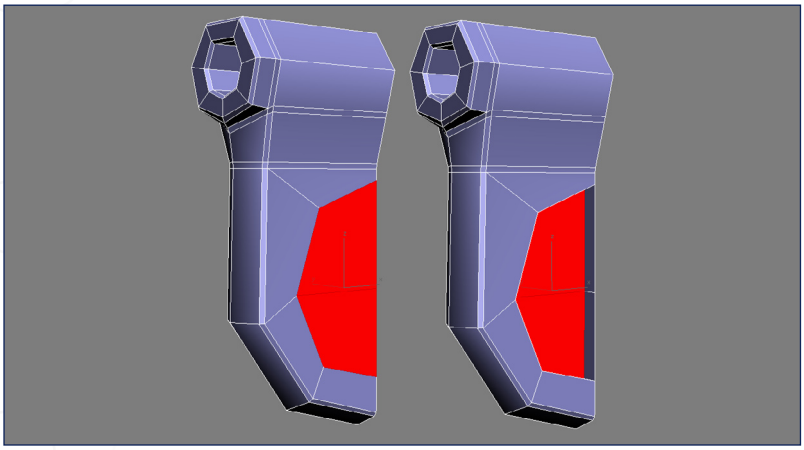
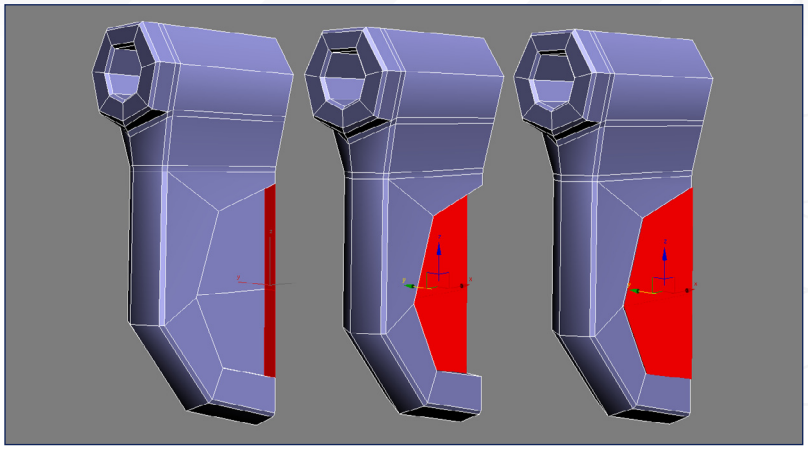


Fig 92

92. We are now going to create a button. With the faces shown below selected, extrude them inside. (**Fig.92**)

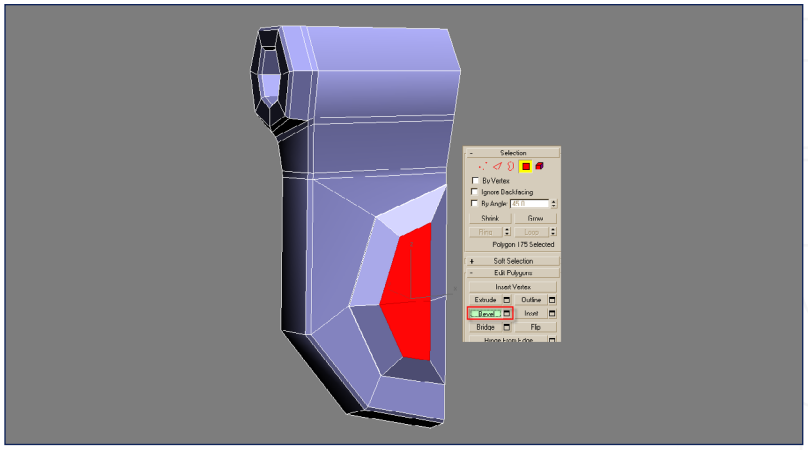
93. Remove the selected faces, then reselect the half button and re-extrude them to the outside. (**Fig.93**)

Fig 93



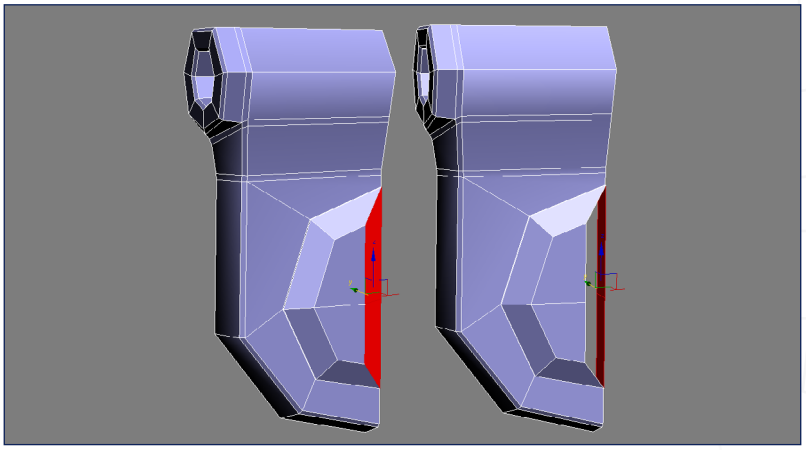
94. With the faces still selected, press Bevel. (**Fig.94**)

Fig 94



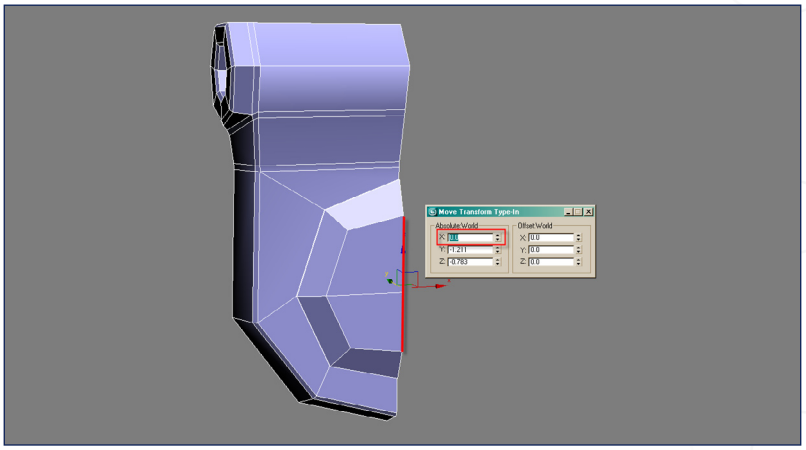
95. Remove the unwanted faces that will cause trouble when you make it Symmetrical. (**Fig.95**)

Fig 95



96. Select edges at the extreme right and align them along the symmetry axis by changing the x value (see 26 to see the display pop up). (**Fig.96**)

Fig 96



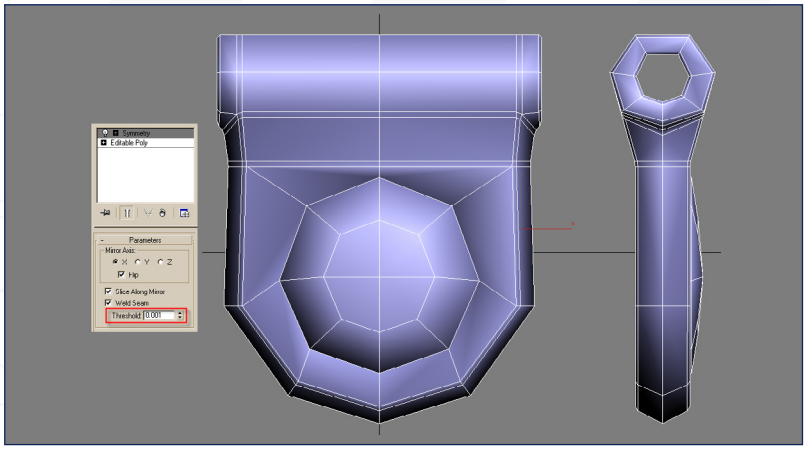


Fig 97

97. You can now apply a Symmetry modifier by changing the Threshold value to weld similar vertices along the middle. (**Fig.97**)

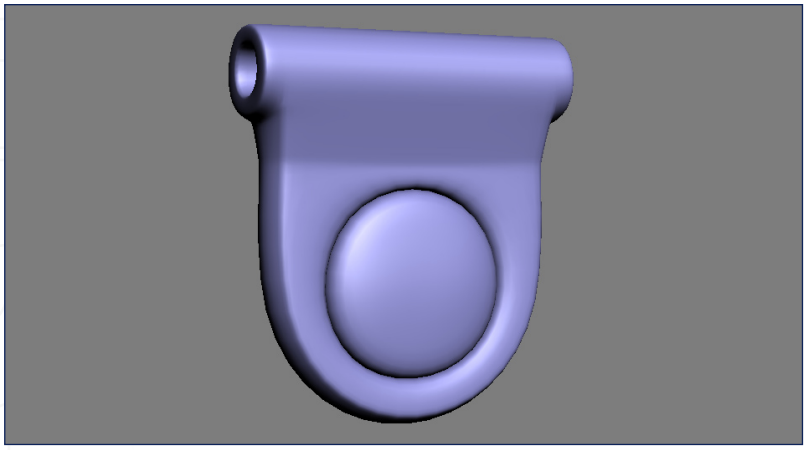


Fig 98

98. A smoothed preview of the eyelet. (**Fig.98**)

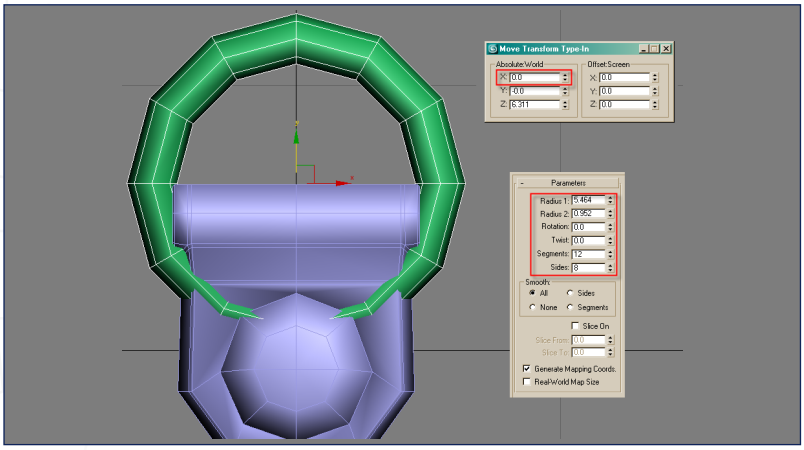


Fig 99

99. We are now going to create the half ring attached to the eyelet. Create a simple Torus primitive with the parameters shown below. Then move it to be at the center of the scene. (**Fig.99**)

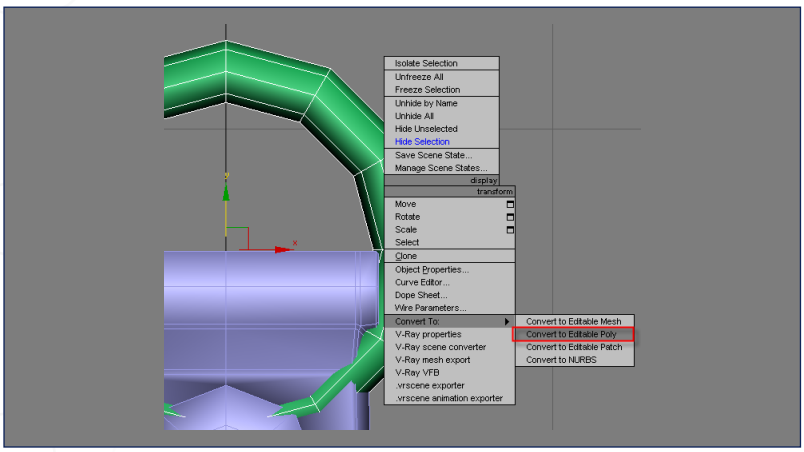
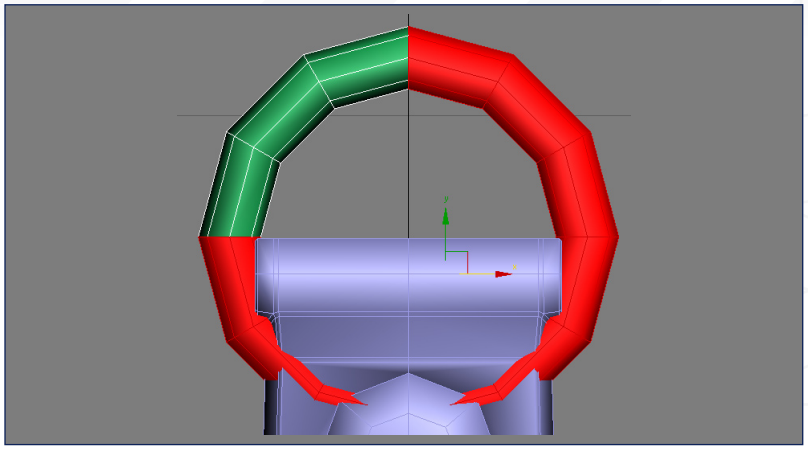


Fig 100

100. Convert it to an Editable Poly. (**Fig.100**)

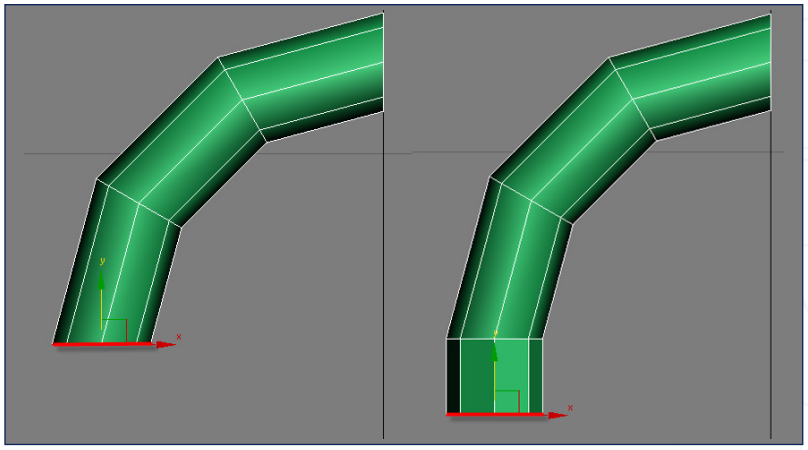
101. Select and remove three quarters of the object. We don't need the bottom part and the right one will be created symmetrically. (**Fig.101**)

Fig 101



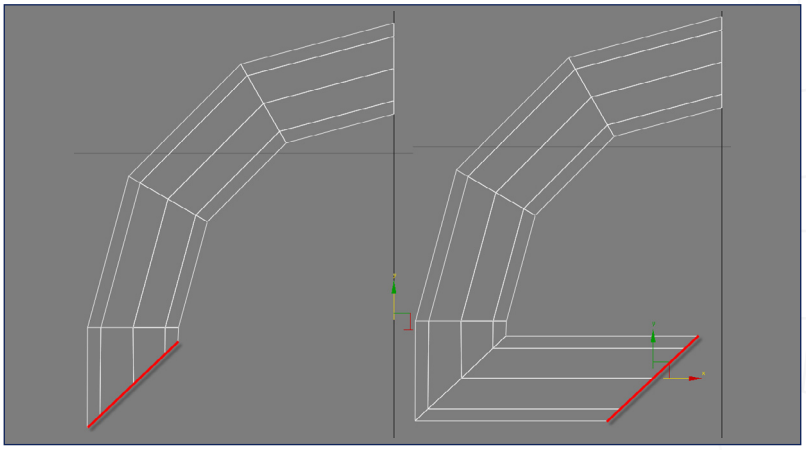
102. On the remaining quarter, select the edge loop at the bottom and extrude it using Shift + Move. (**Fig.102**)

Fig102



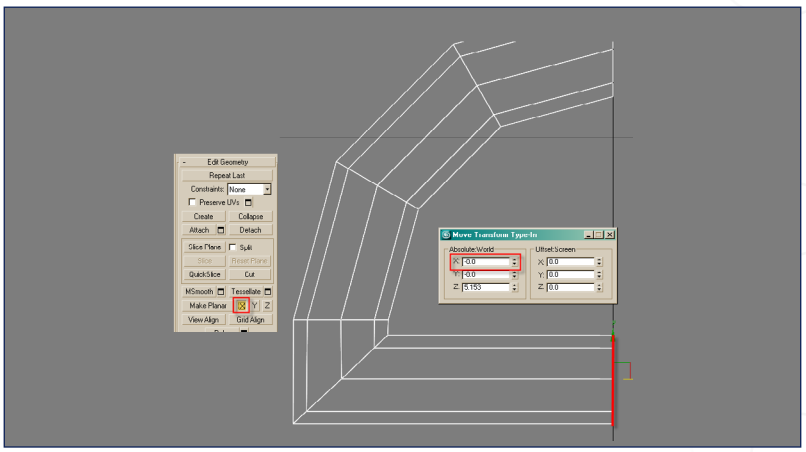
103. Rotate the edges and extrude them once more. (**Fig.103**)

Fig103



104. Finally align them along the x axis. (**Fig.104**)

Fig 104



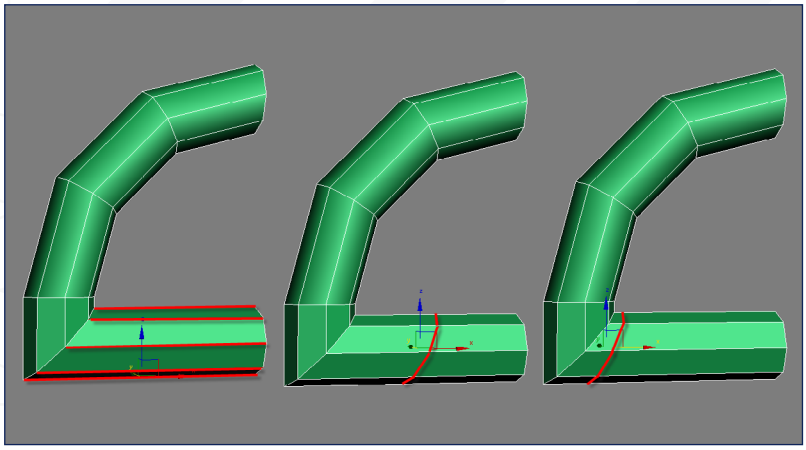


Fig 105

105. Select ring loop at the bottom and press Connect to add an edge loop. This new edge loop will allow us make the corner more angular. (**Fig.105**)

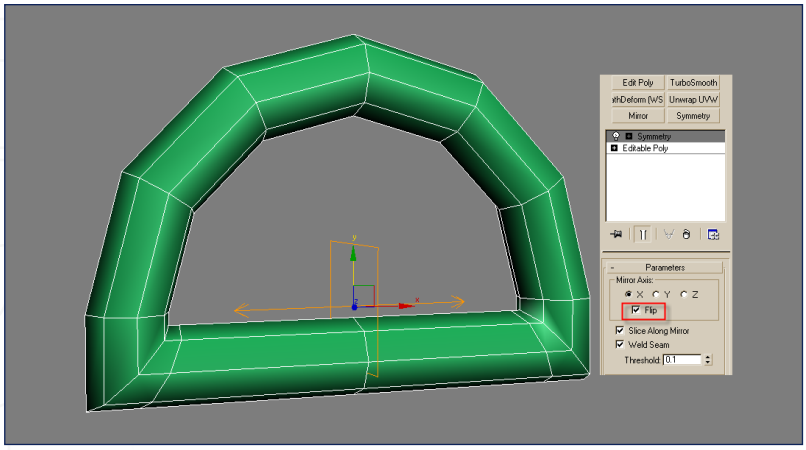


Fig 106

106. Create the symmetry but don't forget to enable Flip to be able to see something. (**Fig.106**)

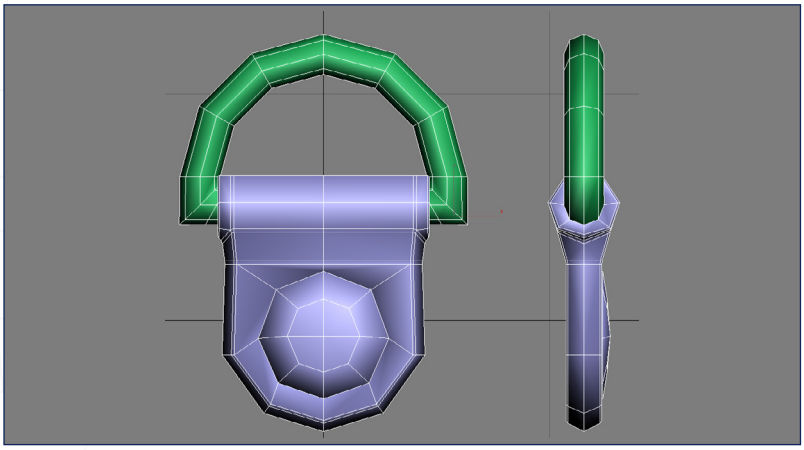


Fig 107

107. Some screenshots from different angles. (**Fig.107**)

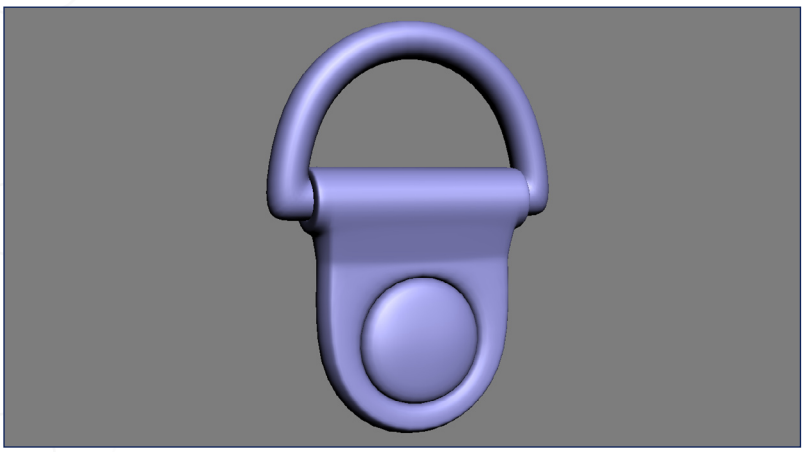
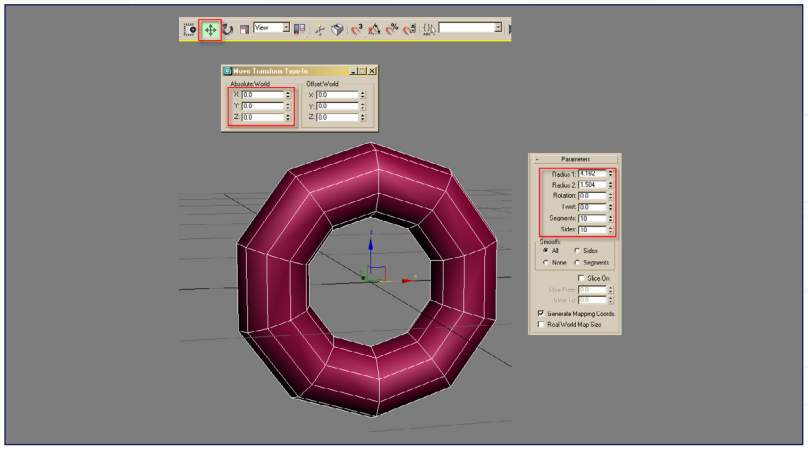


Fig 108

108. Here is a Meshsmoothed final preview of the first eyelet. (**Fig.108**)

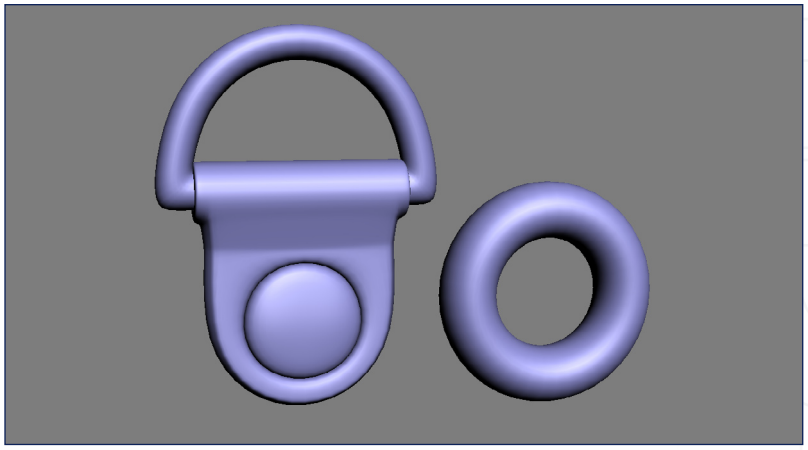
109. We are now going to create the second one which is much simpler. Create a Torus with the same parameters as below and center it in the scene. (**Fig.109**)

Fig 109



110. This completes the eyelet accessories. Next step is to postion them correctly on the shoe. (**Fig.110**)

Fig 110



111. Go back to ZBrush and reload the last sculpting stage of the shoe. (**Fig.111**)

Fig 111

112. Under the Zplugin Tab, scroll down to Decimation Master. You could get the plugin here http://www.pixologic.com/zbrush/downloadcenter/zplugins/. This plugin will allow you to optimize your high subdivision mesh into a mid resolution one. It will be much easier than to import the new mesh into 3dsmax and will save a lot of memory. So, open the Decimation master menu, change the % of decimation to 2,5 and press Pre-process Current to compute the analyzing treatment. Once done, press Decimate Current to get a new light mesh. You can now export it. (**Fig.112**)

Fig 112

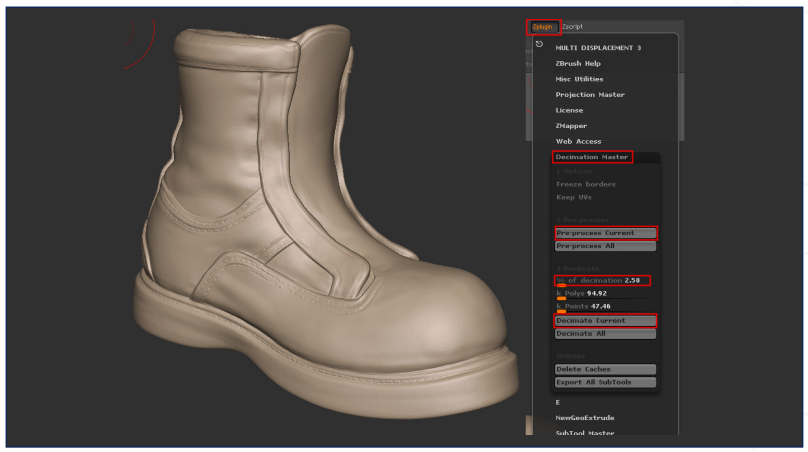


Fig 113

113. Import it into 3dsmax and you may see some minor artifacts but that won't cause any trouble. We just need a reference object to place accessories on. (**Fig.113**)

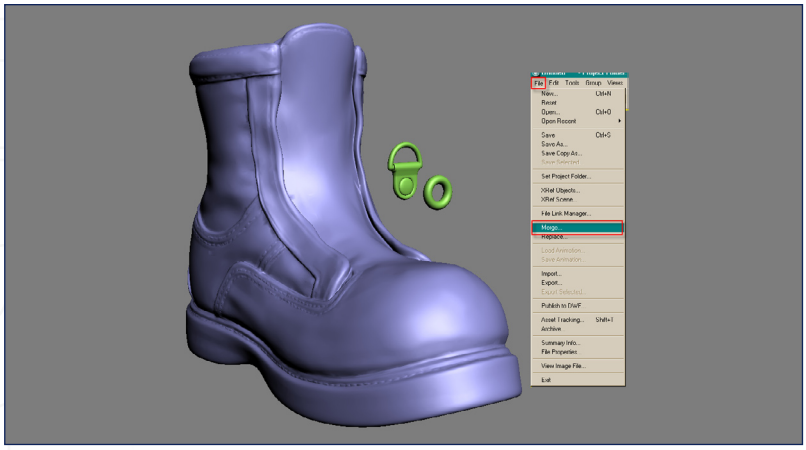


Fig 114

114. Merge the elements you've just created. (**Fig.114**)

Fig 115

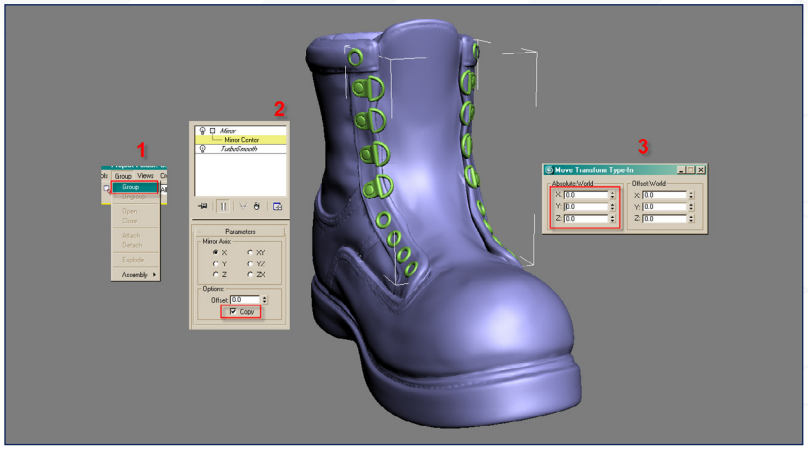
115. Duplicate and move them as shown below. (**Fig.115**)

Fig 116

116. A closer preview. (**Fig.116**)

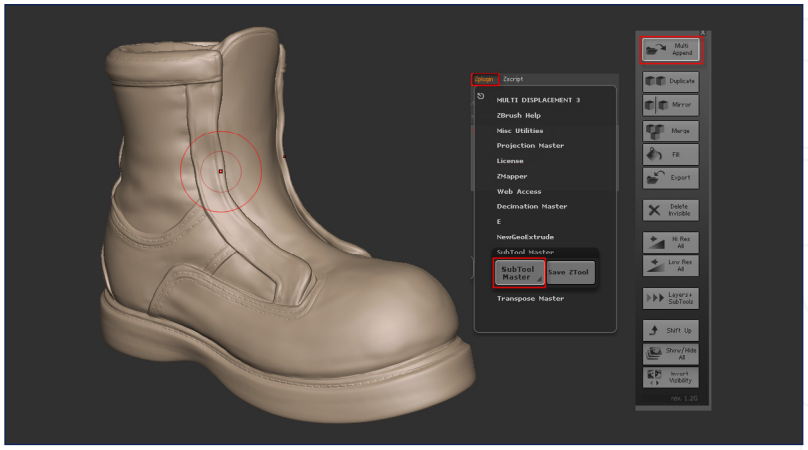
117. We are now going to create the symmetry. First press Group under the main Group menu and apply a Mirror modifier. Click on the + on the left of the Mirror modifier, highlight Mirror center and then move it to the origin thanks to the Move Transform pop up. We are now ready to export the eyelets. Save your file as we will use it later for more accessories. (**Fig.117**)

Fig 117



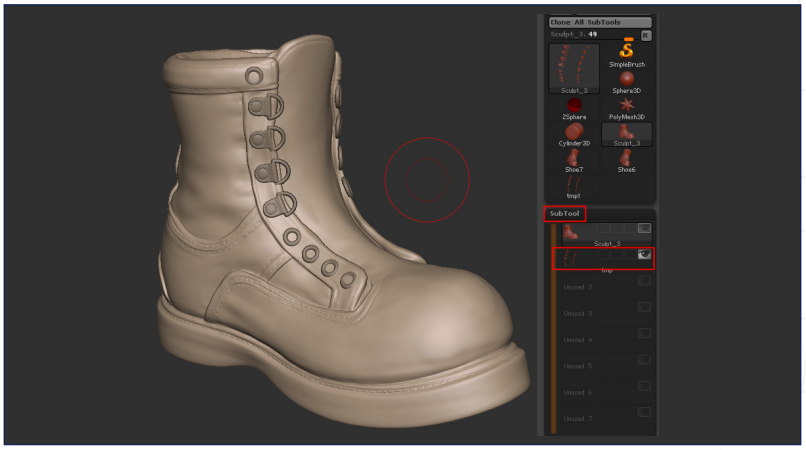
118. Open up Zbrush, under the Zplugin tab, click on Subtool master and a pop-up appears with several functions. Select the first one named Multi Append and select eyelets obj. (**Fig.118**)

Fig 118



119. You could see now a new Subtool on the list; your eyelets. (**Fig.119**)

Fig 119



120. To create the feeling that the eyelets are embedded in the leather, use both the Clay and Inflat brushes to push the volumes in and out. And you can at the same time, fake holes at the middle of the round ones. (**Fig.120**)

Fig 120

Fig 121

121. Here are some different views to show an overall preview of the shoe. (**Fig.121**)

Fig 122

122. Re-open the 3dsmax scene with the optimized shoe and eyelets as we are now going to create the lace. (**Fig.122**)

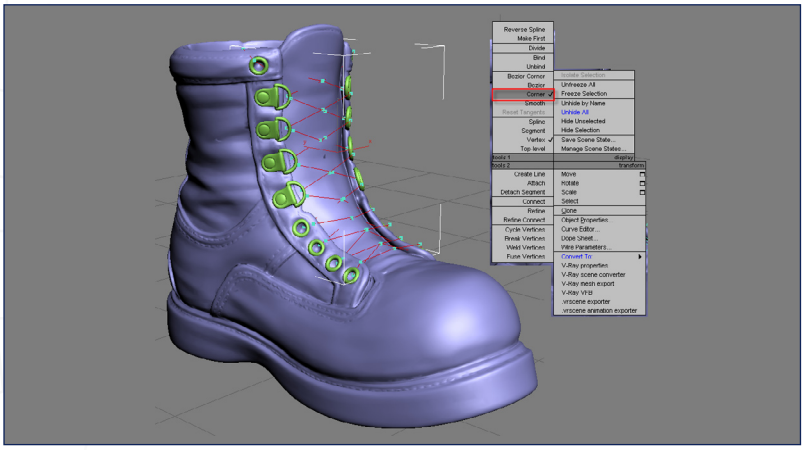


Fig 123

123. Create a Spline as shown below, going through the different eyelets and don't hesitate to look at one of your own shoes as a reference to be sure how they are laced. In vertex mode, select them all, right click and press Corner in order to remove any Bezier / curve configuration. (**Fig.123**)

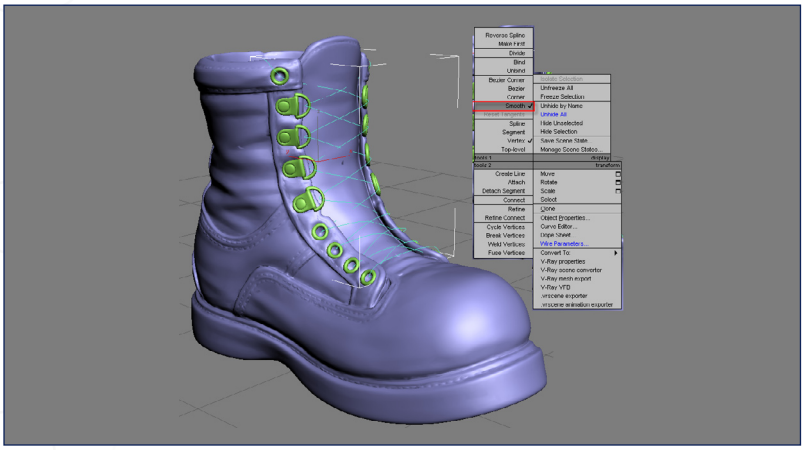
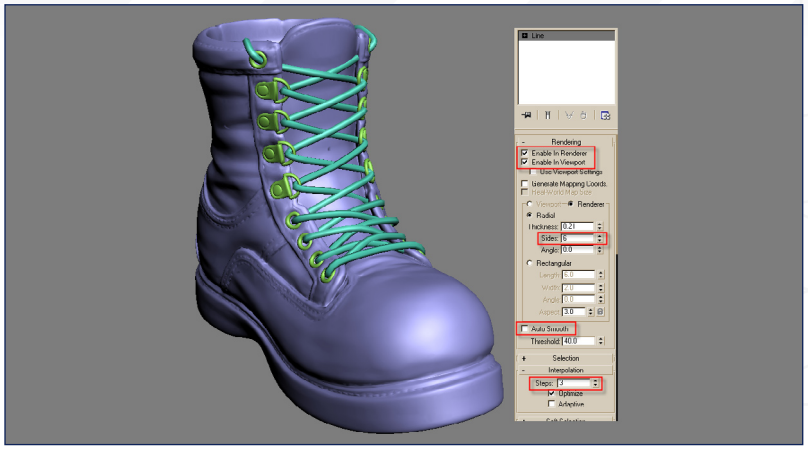


Fig 124

124. Now with the vertices still selected, right click and press Smooth. You have now something clean and uniform. (**Fig.124**)

125. To add more thickness and definition to your lace, go to your line parameters, enable options and change the values as shown below. You are free now to move some vertices to avoid any overlapping or to remove any bad tension especially around the eyelets. When you are satisfied, export it. (**Fig.125**)

Fig 125



126. Bring it into Zbrush by using the same method as explained above (see 118) and subdivide it twice to add more definition. (**Fig.126**)

Fig 126

127. As we did for the eyelets, we are going to make some changes to get something more realistic. Use the Inflat brush to push out the volumes between the lace and to push in volumes where the lace is tight. (**Fig.127**)

Fig 127

128. We are now going to work on the outsole by adding some grip. Because we will use Zbrush projection features, be sure to unable Persp under the Draw tab. Use Shift + move to snap the bottom of the shoe in the front of the camera. Then export the document. (**Fig.128**)

Fig 128

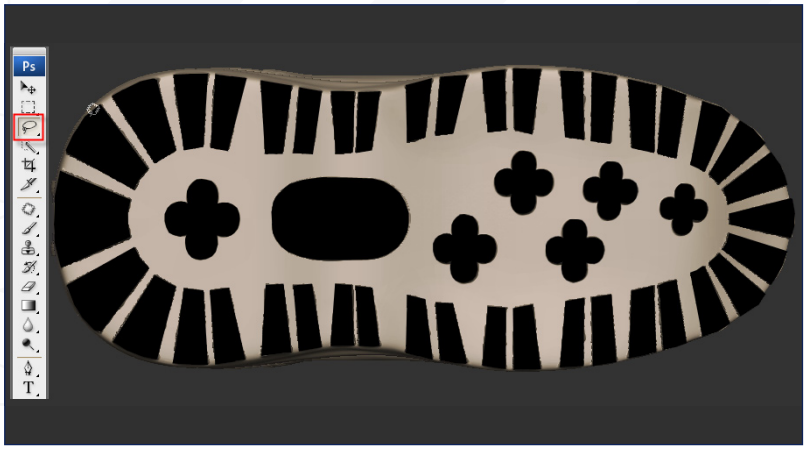


Fig 129

129. Open the document that you just saved in Photoshop and using to the Lasso draw a pattern. Once again don't hesitate to look at some references of your own shoe. You can use the Lasso in two different ways, you can either draw normally to make your selection or you can press Alt + click + draw to make a polygonal selection. (**Fig.129**)

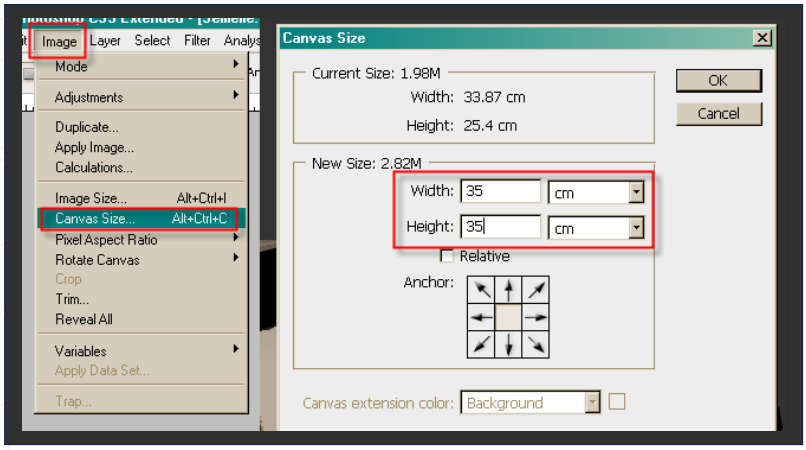


Fig 130

130. When the pattern is done, change the canvas size to get a square which is really important in order to make an alpha work properly in ZBrush. (**Fig.130**)

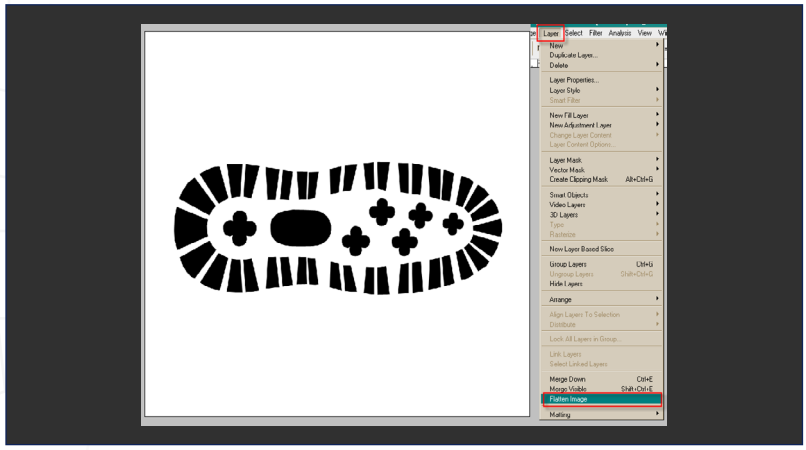


Fig 131

131. Deselect the layer with the sole you imported, and then flatten all the layers. Go to layers, Flatten image. You should have the same result as shown below. (**Fig.131**)

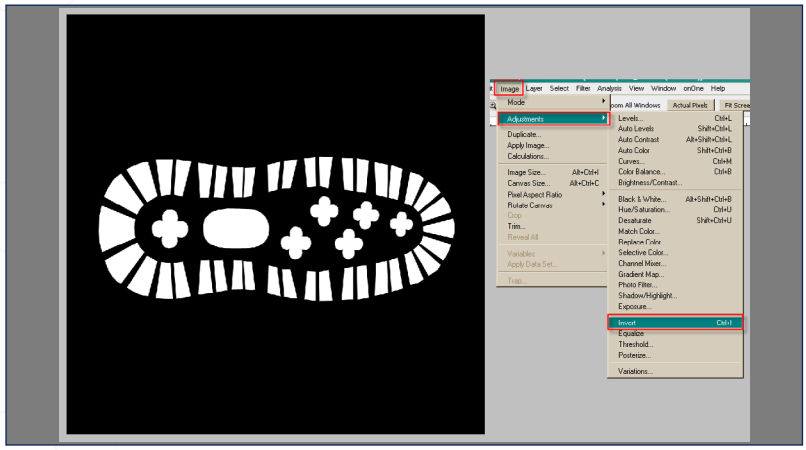
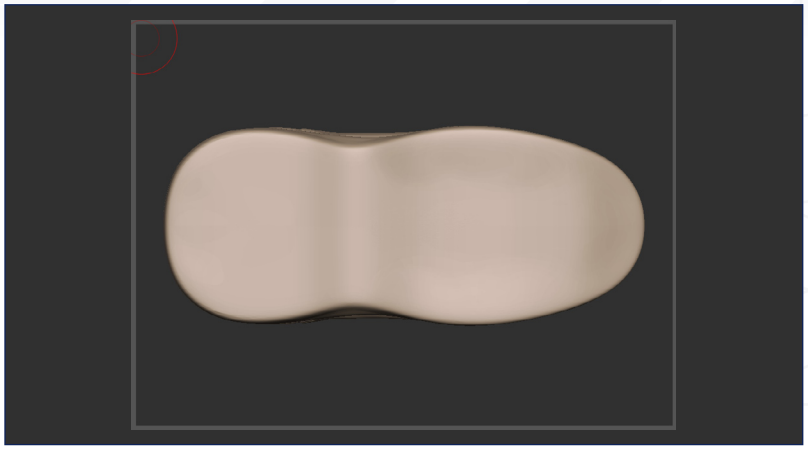


Fig 132

132. Now invert the color to get the grip in white. Go to Image - Adjustments - Invert. The white information is what Zbrush needs for an alpha. (**Fig.132**)

133. Go back to ZBrush. (**Fig.133**)

Fig 133

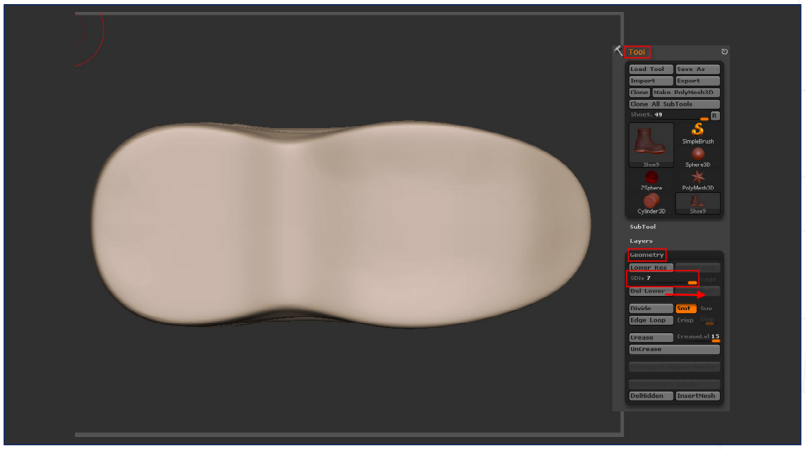


134. Mask the entire shoe except the sole in order to avoid any artifacts during the projection. First go down to subdivision 6 and then select Move instead of Draw on the top menu. Then follow the same technique as we used for chapter 1 by pressing Ctrl + drag the mouse from the middle of the sole to the bottom to get something similar to the following. (**Fig.134**)

Fig 134

135. Use Shift + move to lock the shoe to the bottom and change the subdivision value to its maximum. (**Fig.135**)

Fig 135



136. We are now ready to project. Press Projection Master on the top left. Once a pop-up appears change the parameters as shown below. (**Fig.136**)

Fig 136

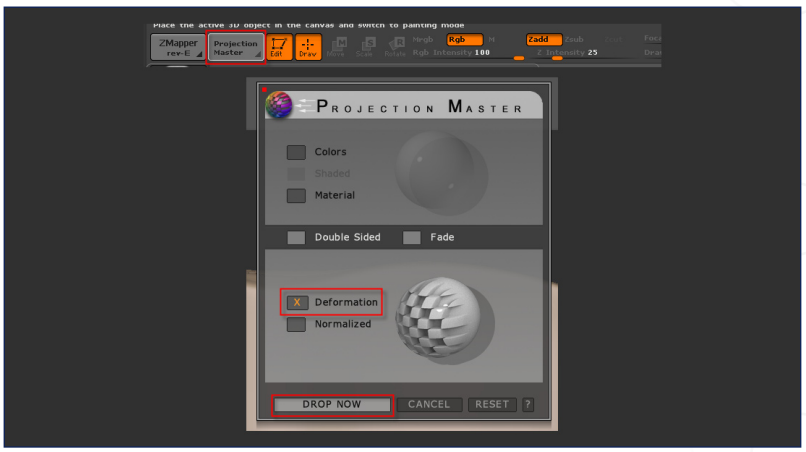


Fig 137

137. Change the Stroke and the alpha parameters on the left with the alpha you created in Photoshop, then right click in the canvas and change the intensity value to a lower one. (**Fig.137**)

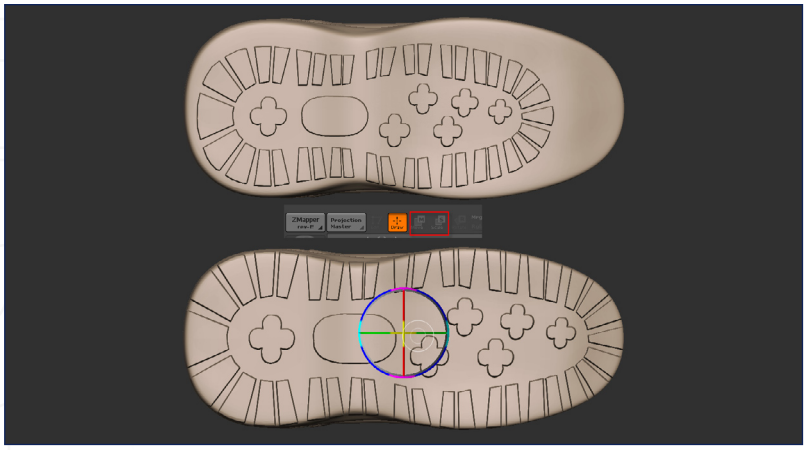


Fig 138

138. Drag the alpha on your object first, and then adjust it using the Move and Scale button at the top of the interface. (**Fig.138**)

Fig 139

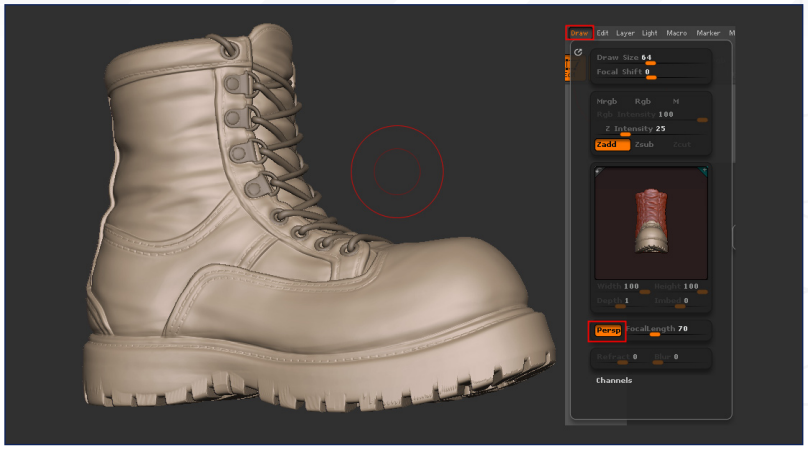
139. When you are satisfied, press the Projection master button once again and without changing anything press Pickup Now which will execute the projection. You can see a preview below. There will be some artifacts but we are going to fix those shortly. (**Fig.139**)

Fig 140

140. Remove the mask (see 59) (**Fig.140**)

141. Re activate the perspective mode under the Draw Panel. (**Fig.141**)

Fig 141



142. Now use the Clay and Smooth brush to remove and polish the previously generated artifacts. Don't worry about the bumpy imperfections you may generate as this will add more realism. (**Fig.142**)

Fig 142

143. A current preview of the shoe after this last process. (**Fig.143**)

Fig 143

144. We are now going to prepare the mesh for the last accessory. (see 112) (**Fig.144**)

Fig 144

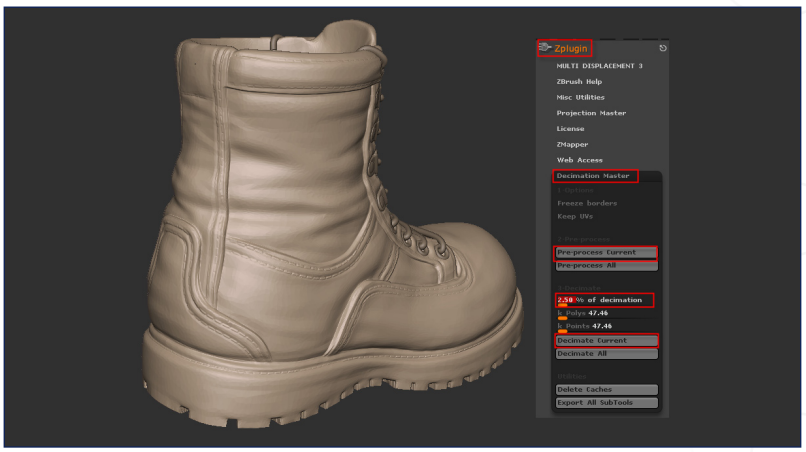


Fig 145

145. Import it in 3dsmax. (**Fig.145**)

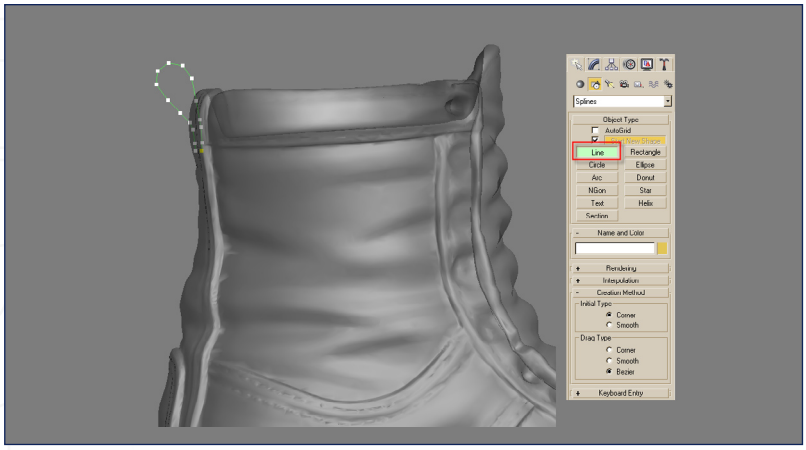


Fig 146

146. In the left view, create a line as shown below. We are going to create a leather buckle at the back. (**Fig.146**)

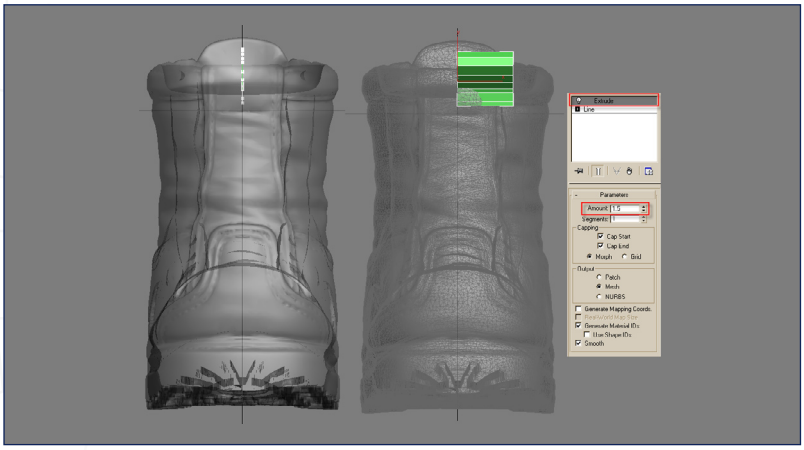


Fig 147

147. Switch to the back view and apply an Extrude modifier. (**Fig.147**)

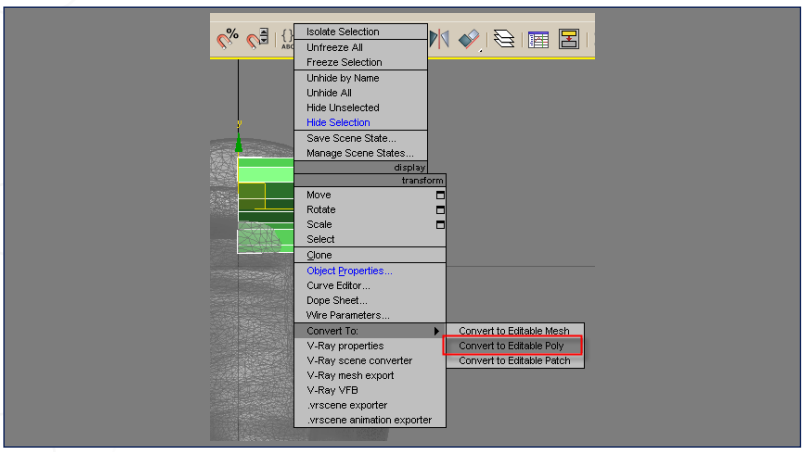
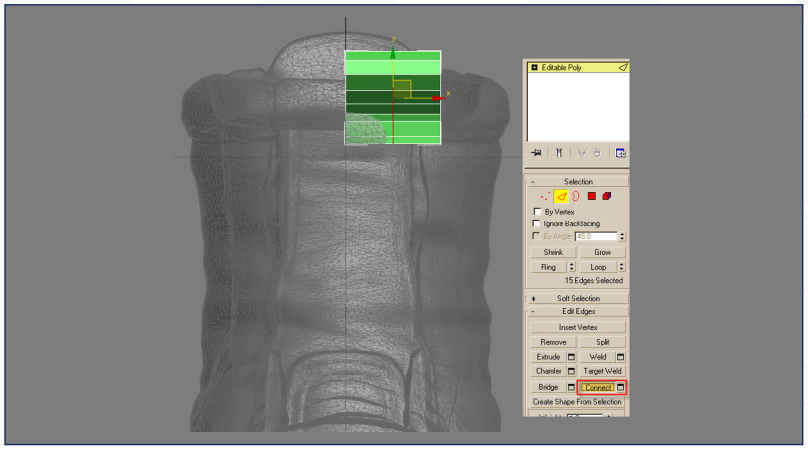


Fig 148

148. Convert it to an Editable poly. (**Fig.148**)

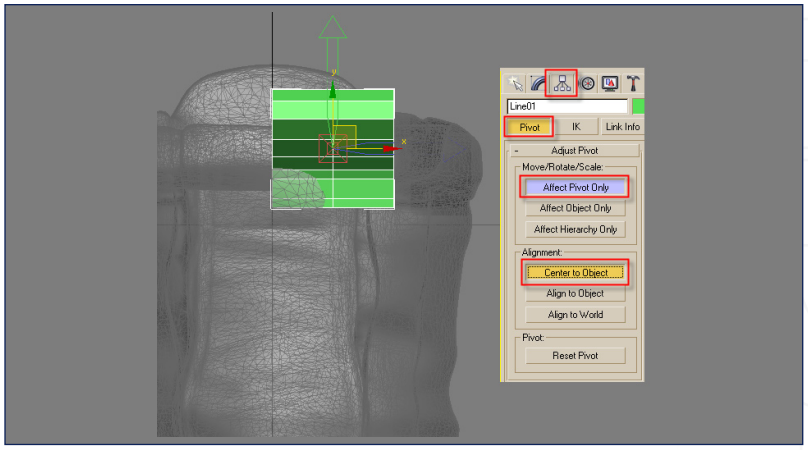
149. Select the horizontal edges and create an edge loop by pressing Connect. (**Fig.149**)

Fig 149



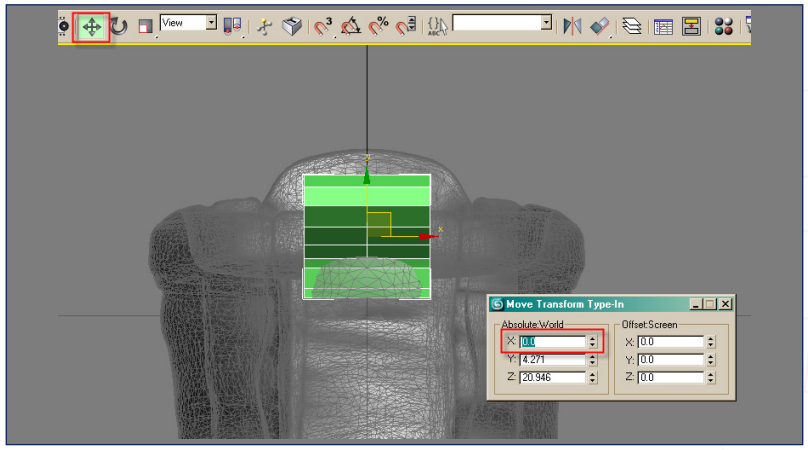
150. Center the object pivot as we have done many times previously. (**Fig.150**)

Fig 150



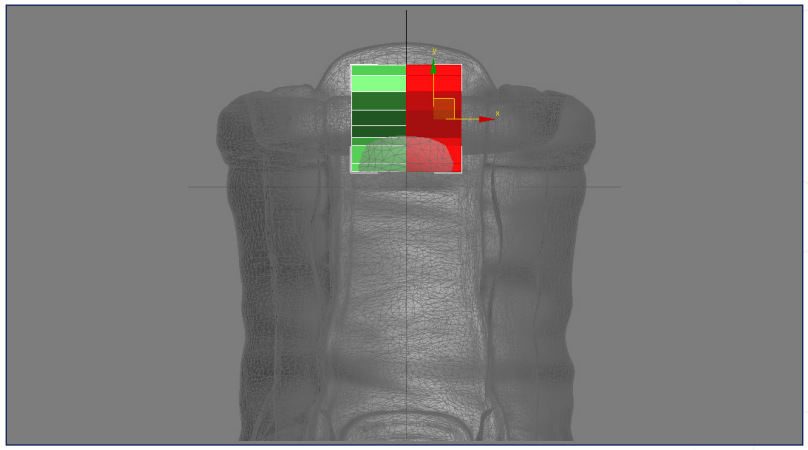
151. Move the object to the center to prepare the Symmetry axis. (**Fig.151**)

Fig 151



152. Select and remove the right side. (**Fig.152**)

Fig 152



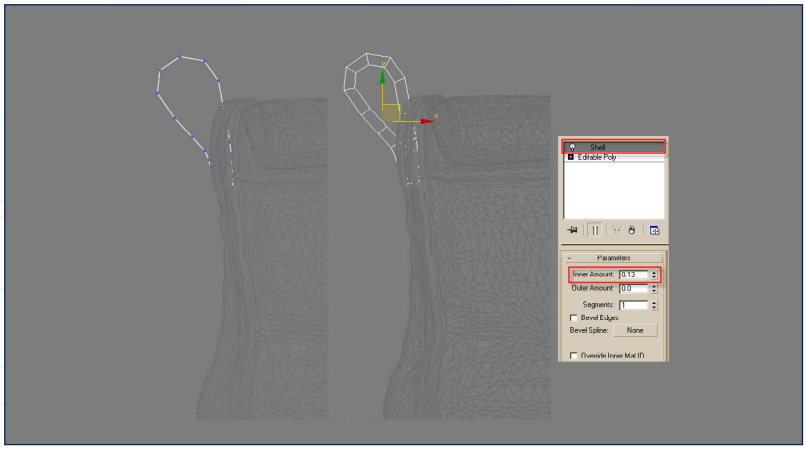


Fig 153

153. Apply a shell modifier to add some thickness. (**Fig.153**)

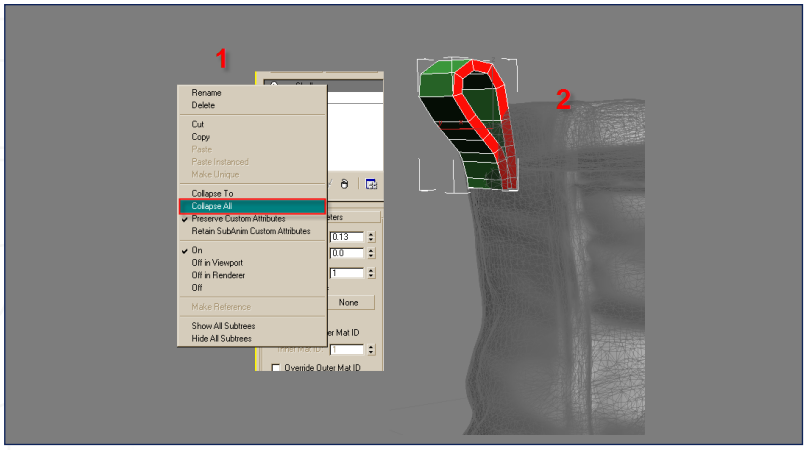


Fig 154

154. Collapse the stack; right click on Shell modifier and Collapse All. To be able to make it symmetrical later remove the created faces in the middle. (**Fig.154**)

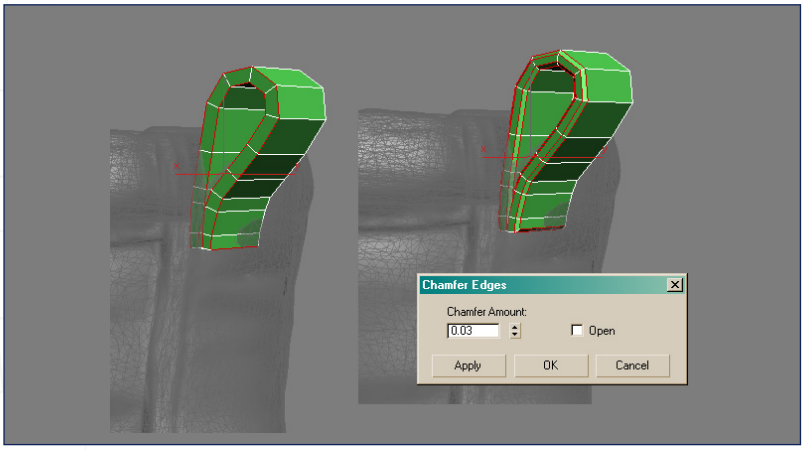


Fig 155

155. Select all the edges except ones on the symmetry axis and press the small button beside the Chamfer button. This button will allow you to select a numerical value to be more accurate during the process. (**Fig.155**)

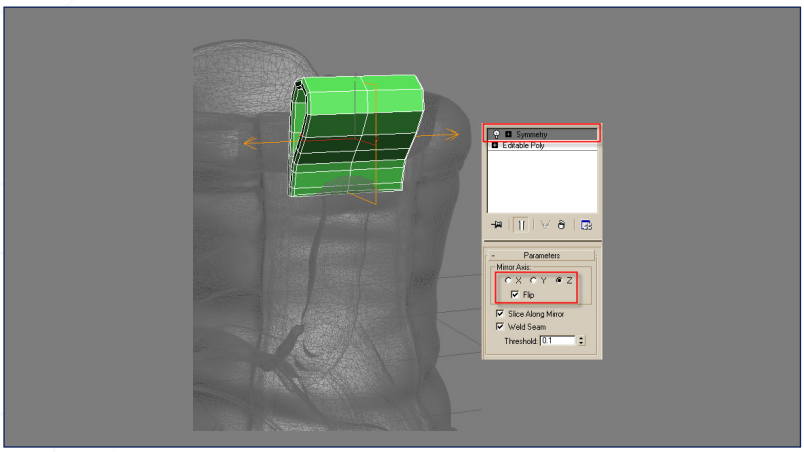
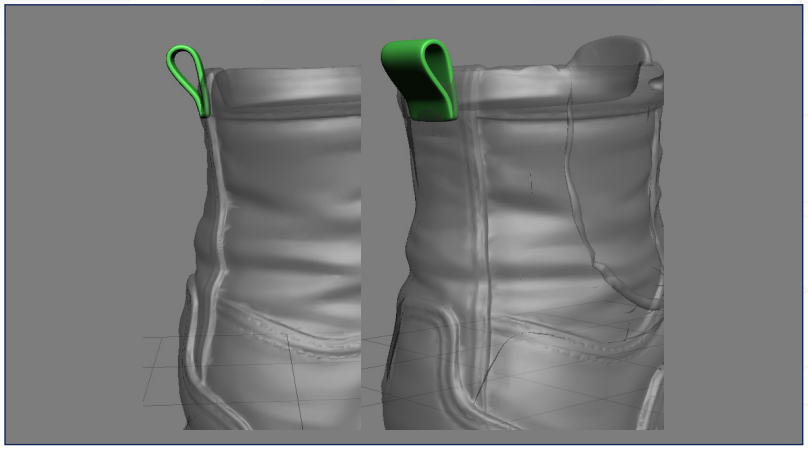


Fig 156

156. You are now ready to create the right part with a Symmetry modifier by changing the mirror axis and once again not forgetting to check the Flip option. (**Fig.156**)

157. Here is a preview of the leather from different angles. (**Fig.157**)

Fig 157



158. Bring this new element in Zbrush (see118) (**Fig.158**)

Fig 158

159. Using the Clay brush push in the surface of the shoe which intersects with the leather piece. (**Fig.159**)

Fig 159

160. Select the new imported object and subdivide it 3 times to add more definition and to be able to sculpt some additional detail. (**Fig.160**)

Fig 160

Fig 161

161. With the same techniques as you used for all the leather pieces on the shoe, add some details. (**Fig.161**)

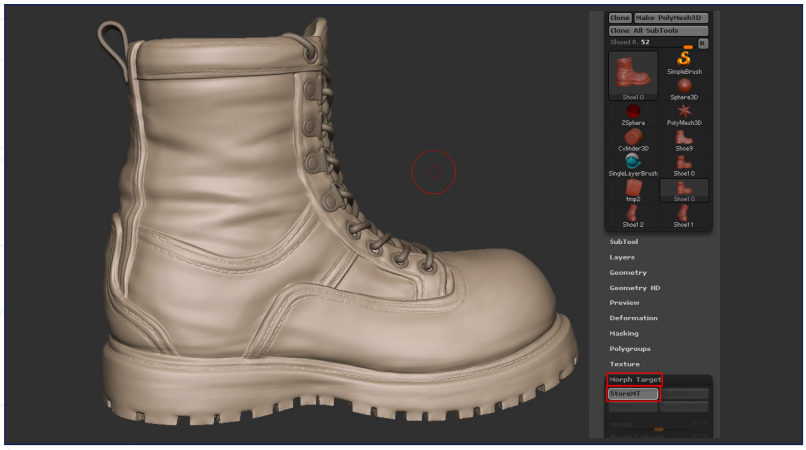


Fig 162

162. Now we are going to do the last detail pass on the shoe. Scroll down to Morph Target, open it and press StoreMT which will store the current stage of your object. (**Fig.162**)

Fig 163

163. Select the standard brush and change the stroke and the alpha as shown below. Then right click in the canvas and change the brush intensity value to 11. (**Fig.163**)

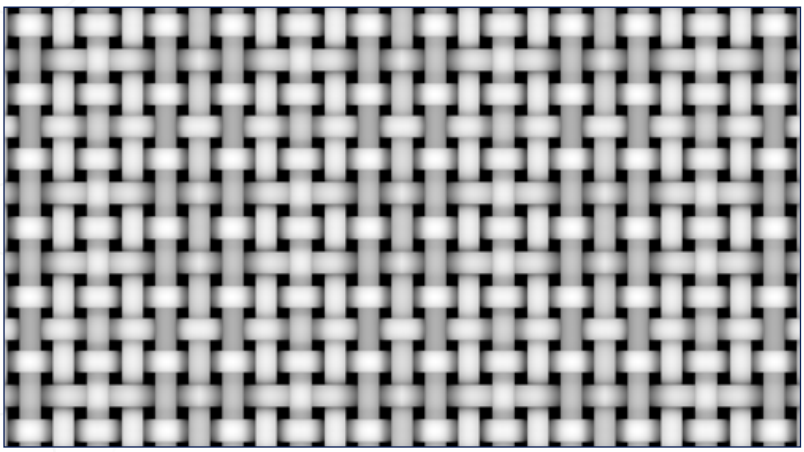
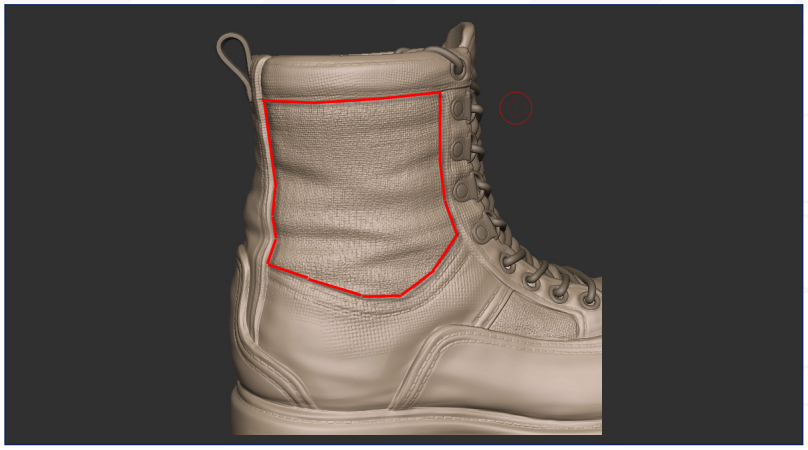


Fig 164

164. Here is the alpha used above. (**Fig.164**)

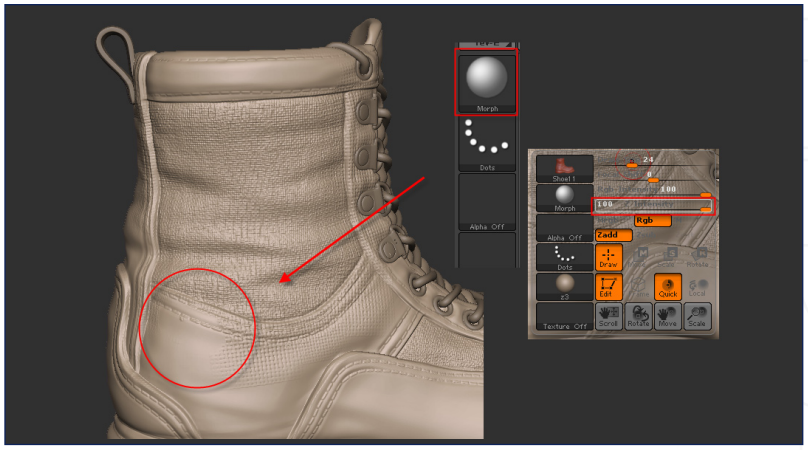
165. Drag and drop the alpha several times into the highlighted area and trying to keep the same alpha scale. Don't worry if you go over the area. (**Fig.165**)

Fig 165



166. Now select the Morph brush and change the intensity value to maximum 100 and paint on the unwanted area. You morph the selected area by the old stored one. (**Fig.166**)

Fig 166



167. Do that for the small area on the side too but below by using the same technique. (**Fig.167**)

Fig 167

168. At this stage the shoe is done but unfortunately, it is too symmetrical so let's ammend that. Open Subtool Master and select Merge which will merge all the visible SubTools into a big one. (**Fig.168**)

Fig 168

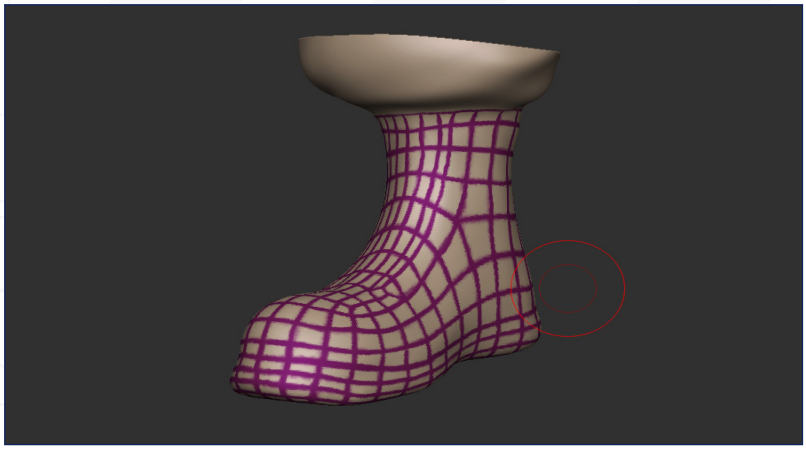


Fig 169

169. Open up an old version of your shoe, the one you used to re-create a good topology. The position, rotation and scale of this one will be used as a reference for the new finished version. (**Fig.169**)

Fig 170

170. Disable colorize to get a better visibility. (**Fig.170**)

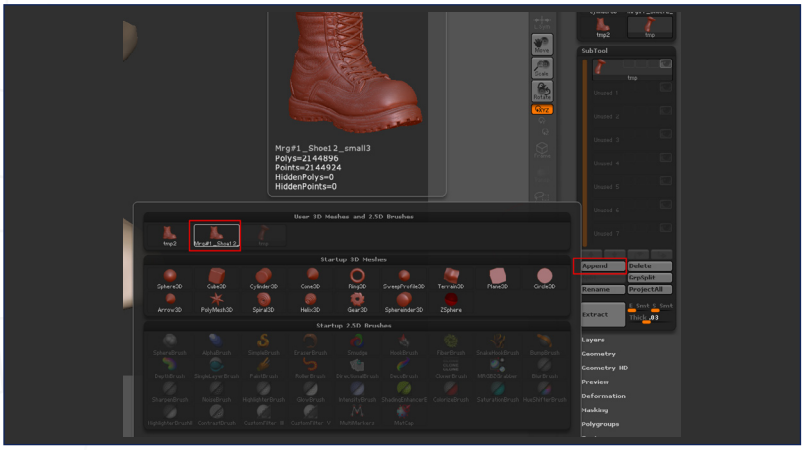


Fig 171

171. Append the Merge shoe version with the one above. (**Fig.171**)

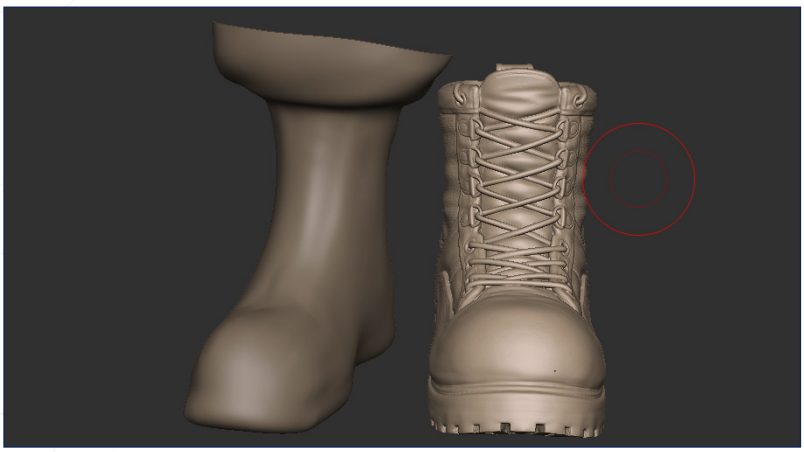
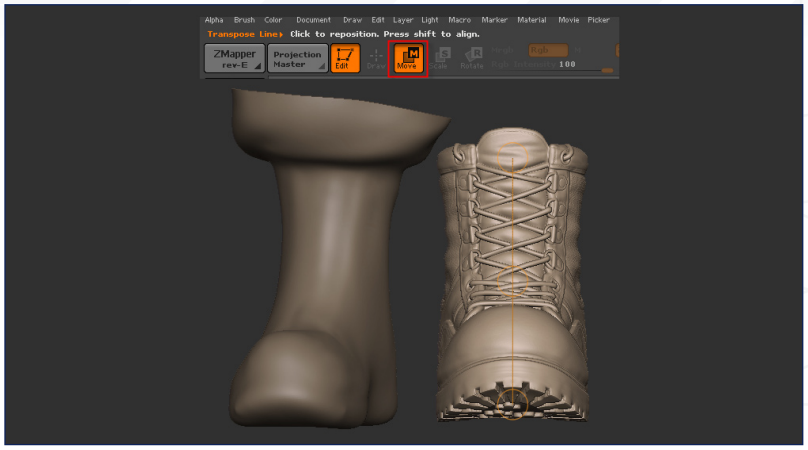


Fig 172

172. Now the two versions are beside one another on the canvas. (**Fig.172**)

173. We are going to use the Transpose function to transform and move the new shoe to match the old one. Drag the three balls as shown below but be sure to keep the line straight by pressing shift each time you move the balls. To move the balls, select the circle line but do not press inside. (**Fig.173**)

Fig 173



174. By pressing and moving inside the ball situated in the middle, move the shoe to the left. (**Fig.174**)

Fig 174

175. Change the balls position in the top view, press rotate and by selecting and moving the ball in the front of the shoe; rotate it to match the one underneath. (**Fig.175**)

Fig 175

176. Do this several times to match the old mesh as best as possible. (**Fig.176**)

Fig 176

Fig 177

177. With the move Brush, move some areas to fit more with the reference underneath. (**Fig.177**)

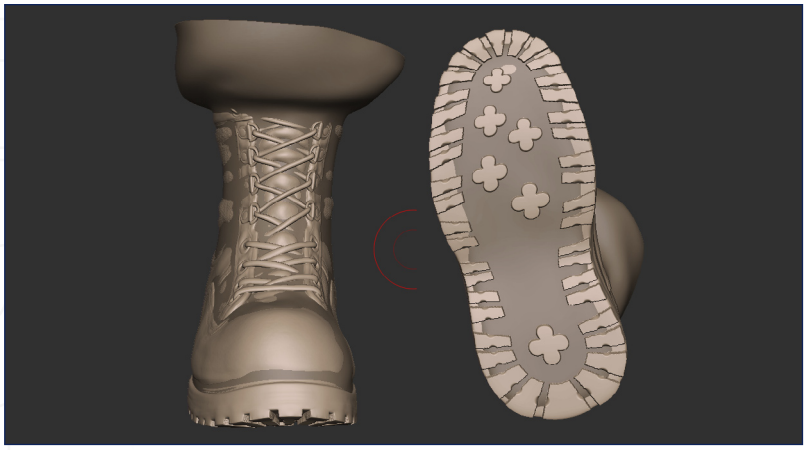


Fig 178

178. Here are the results from different angles. (**Fig.178**)

Fig 179

179. And here is the final shoe. (**Fig.179**)

Fig 180

180. Let's finish with a beauty render inside ZBrush. (**Fig.180**)

CEDRIC SEAUT

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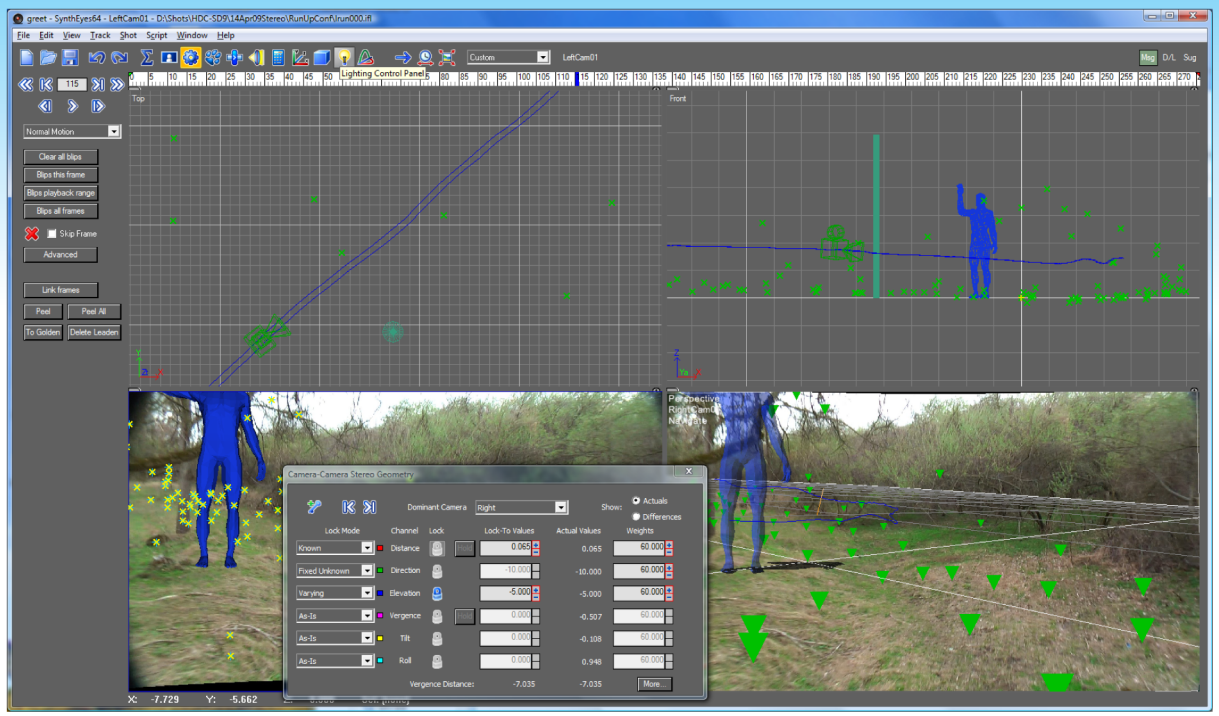

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V-Ray for 3ds Max

Chapter 3 - Vray Settings

Welcome to the V-Ray for 3ds Max tutorial series which will cover all the key parameters of V-Ray: global illumination, materials, lighting and more. We will look in-depth at each setting – how it works, what repercussions it has – and we will also take a peek at some of the special features that V-Ray has to offer. If you've ever had any doubts about how to get into V-Ray, or you simply would just like to know a little more about a particular section of the software, this series is for you!

Chapter 4: Lights - Issue 55 March 2010
Chapter 5: Plugins - Issue 56 April 2010

V-Ray for 3DS Max Chapter 3 - Vray Settings

Software Used: V-Ray, 3ds Max

For this section of Vray we will be overlooking at Vray's advanced rendering settings, very useful to know for optimizing render times while increasing quality, or simply troubleshooting. No need to sugar coat it this will not be the funniest chapter of the series

A: Global switches

As most settings in here are pretty much self explanatory, some are trickier to handle.

Material Max depth: this will override reflection and refraction max depth, meaning any value you set in the material editor will be ignored for the one you set here.

Filter maps: enables the Antialiasing solution to be applied to loaded textures, same applies for GI.

Secondary ray bias: this will remove all black cutoffs you may get when rendering overlapping faces.

Fig.01: Secondary ray bias at 0.000
Fig.02: Secondary ray bias at 0.001

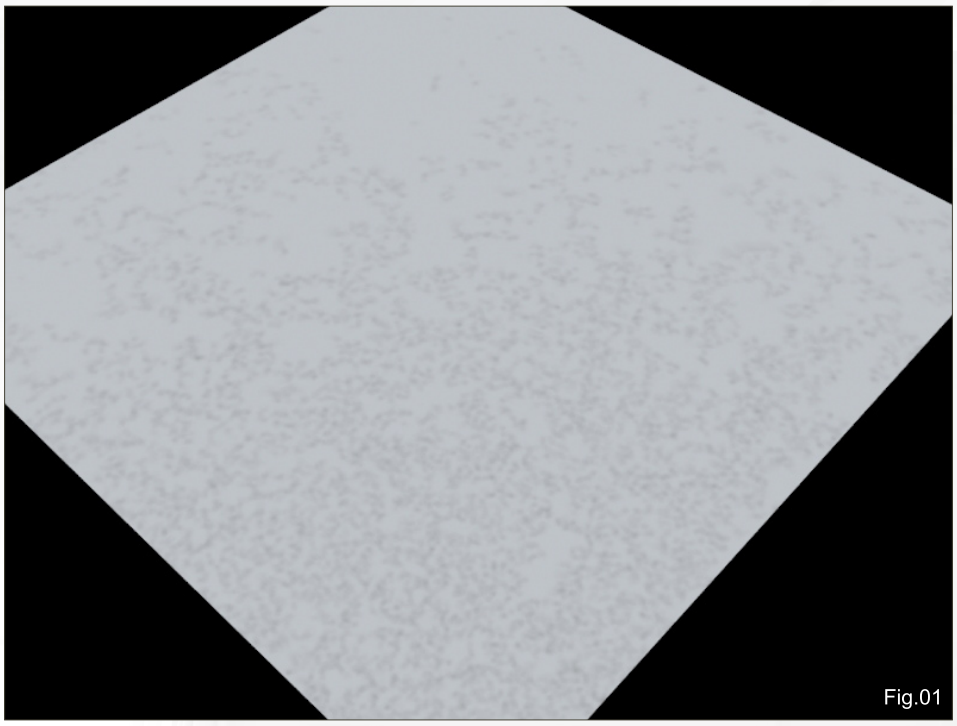


Fig.01

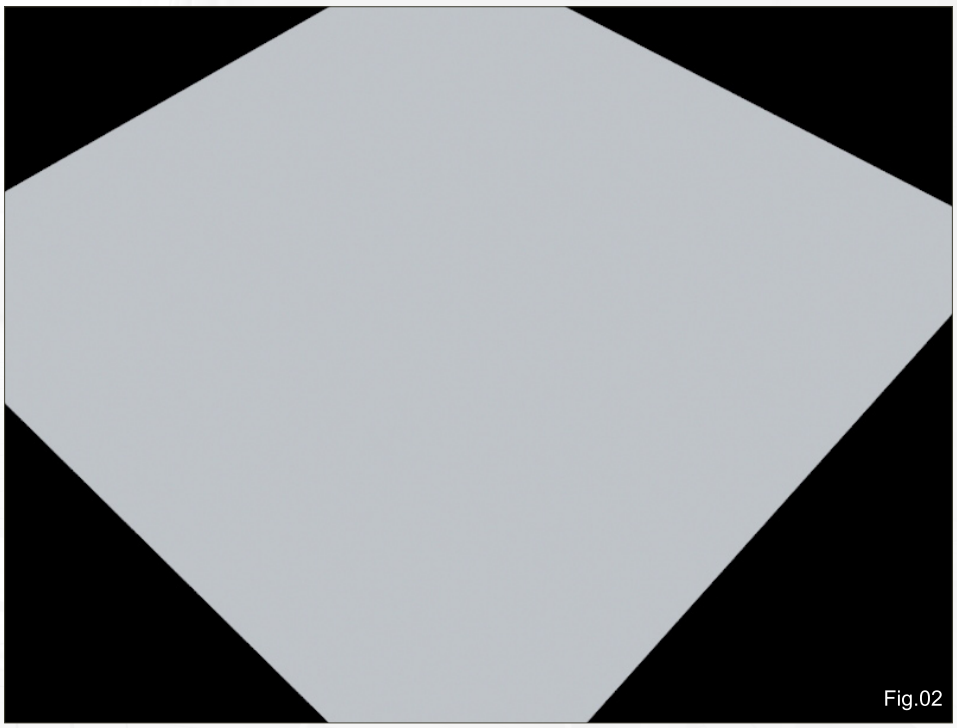


Fig.02

B: Image Sampler (Antialiasing)

There are three AA solutions in Vray, each with different advantages and shortcomings:

Fixed: a simple yet powerful solution, you determine the number of samples generated per pixel, subdiv value which is squared, meaning you set it to 1 and one sample will be computed per pixel, set it to 4 and 16 samples will be averaged for the final render per pixel.

As you are the one setting the amount of subdivision, Vray doesn't have to spend time figuring it out for each pixel in the image, in very complex scenes where most pixel need to be averaged for a correct aliasing this can speed up render times in very rare cases.

Adaptive DMC: this is the best sampler for heavy scenes, you control the minimum possible samples as well as the maximum, obviously leave the minimum at 1, you rarely need to increase it.

Color threshold: controls the antialiasing for textures, lowering it increases details, you can use this to speed up renders, but this will affect other aspects of the render such as shadows and reflections.

Adaptive subdivision sampler: a very interesting sampler as it can under sample flat surfaces thus speeding up renders while keeping the

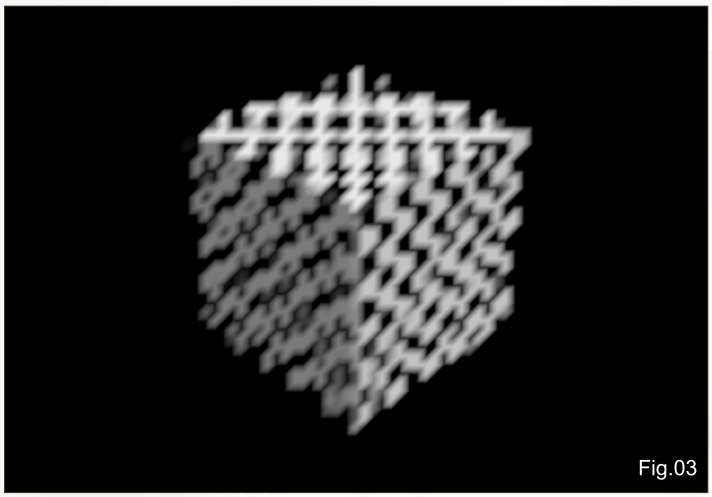


Fig.03

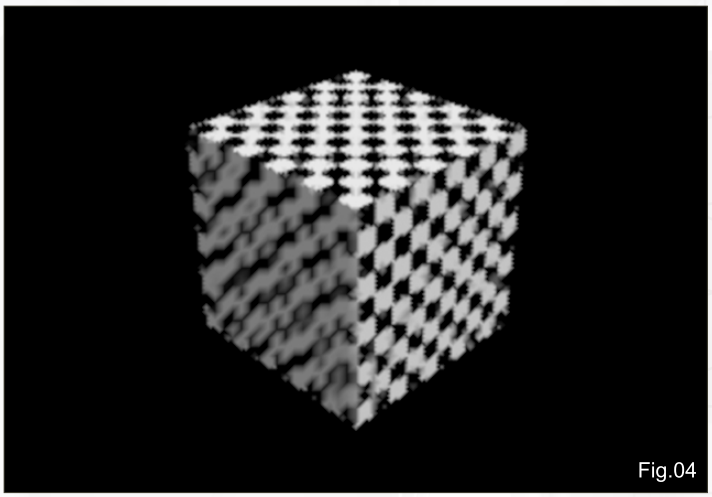


Fig.04

AA sharp where needed, not the preferred solution for complex or texture heavy scenes, furthermore it needs much more RAM the the previous two solutions.

Randomize samples: check this should you have many horizontal or vertical lines.

Color threshold: this affects the antialiasing for textures, with adaptive subdivisions increase to speed up render while sacrificing texture quality, to keep at very low values 0.1, for good results.

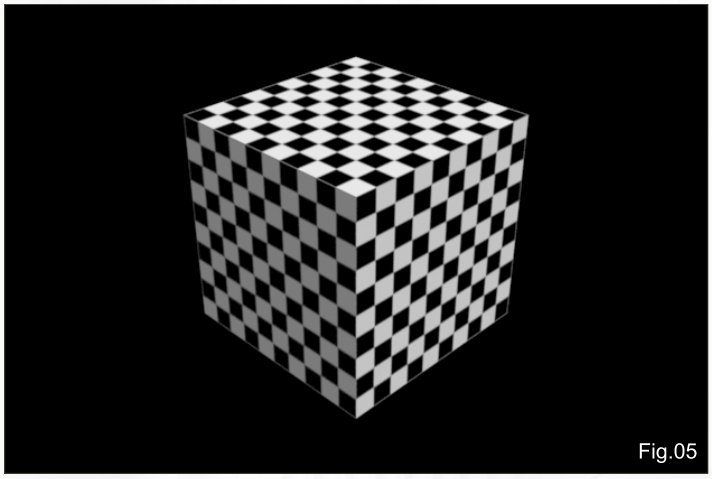


Fig.05

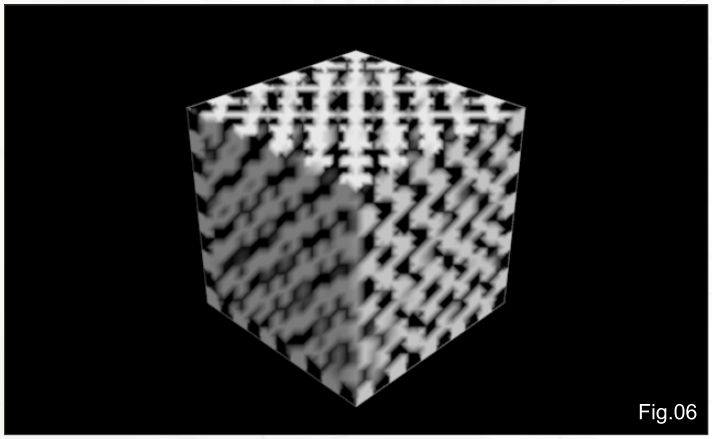


Fig.06

Object outline: this will keep the edges of objects sharp should you set the color threshold to high values , great for speed renders with no regard to texture quality.

Fig.03: color threshold 20.0
Fig.04: color threshold 5.0
Fig.05: color threshold 0.1
Fig.06: color threshold 10 with object outline on

Now which to use and when: in most cases go with adaptive DMC it has great image quality and render speed, and doesn't take much ram: for simple scenes or for previews Adaptive subdivisions is recommended although keep an eye on RAM usage; for very complex scenes where time is not a problem Fixed rate is the way to go, do a region render of the most complex part of the scene to find the subdivisions value needed and hit full render, nothing can go wrong with it you'll just get a little older waiting for it to finish.

C: DMC sampler

Advanced Vray setting, used to control overall image quality, to handle with care as it affects all of Vray's settings, GI, camera effects, glossy reflections and refractions, area lights, motion blur etc…

Each of these settings have a direct effect on image quality and render times.

Amount: decrease for higher quality, controls vray's precision for blurry subjects, and the amount of samples used.

Noise: decrease for higher quality, controls vray's adaptation to blurry reflection, shadows etc..

Min samples: sets the minimum number of samples needed per pixel, as more samples mean a better average increase this for higher quality.

Global subdiv multiplier: multiplies every subdivision setting in the scene, except for light cache, photon maps caustics and antialiasing, however motion blur, reflection samples, depth of filed, irradiance map settings, brute force GI, shadows will be affected.

This simply multiplies every setting by the value set, very useful for quick changes for previews to final render without changing every setting by hand.

Time independent: turned on this will add randomness to the global image noise within GI AA etc.., good for animations as it will change the noise randomness on a per frame basis, rerendering the same frame again will give the same result.

D: Color Mapping

Color mapping changes the images final colors, light values and saturation.
I will not try to explain linear workflow in a few sentences as it is an complete article by itself. If you are not familiar with this, I strongly suggest you look for some reading material about linear workflow or SRGB color space and its advantages.

E: System

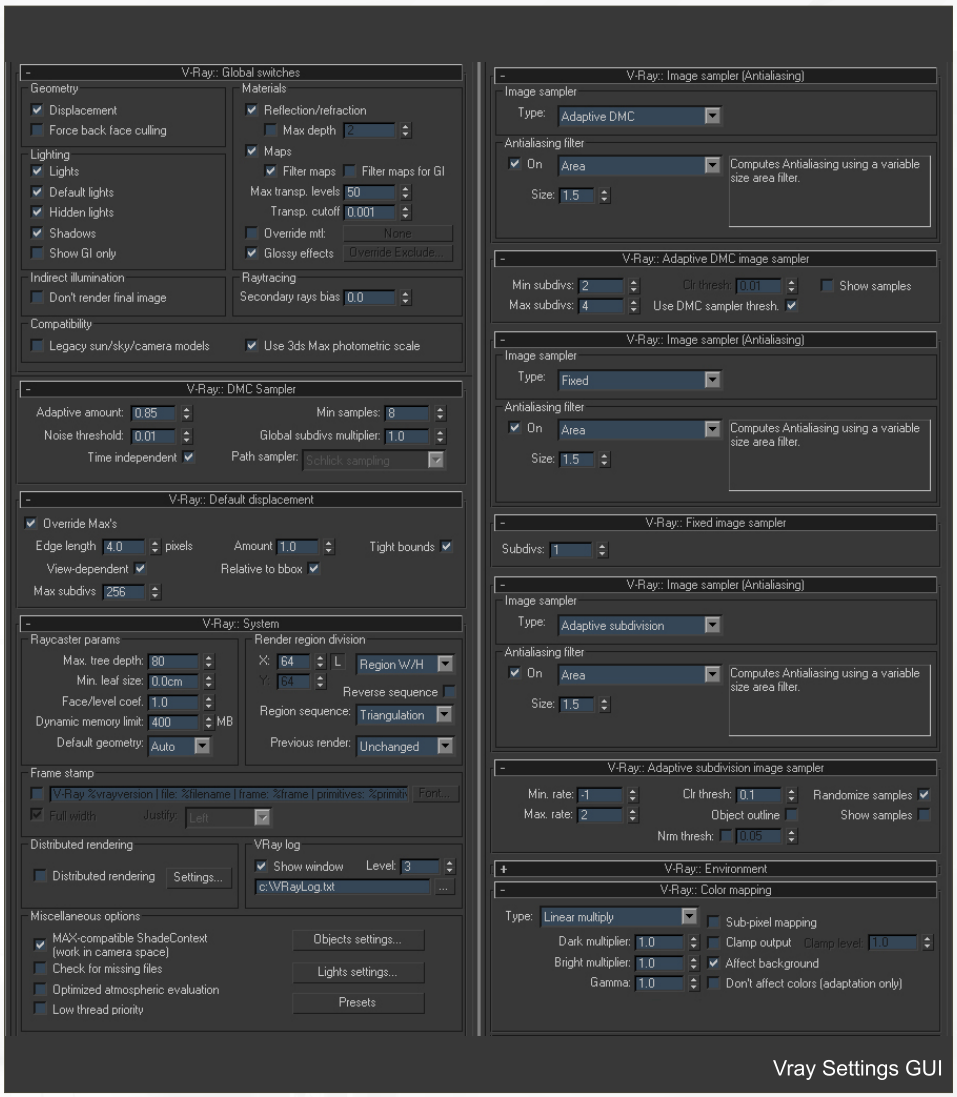
This part of vray settings controls its BSP, which is how vrays creates a 3D grid around your scene cutting it into different parts depending on the geometry to use as less ram as possible and speed up rendering.

Max tree depth: increase to render faster, this will need more memory though.

Min leaf size: leave at 0.0, this changes the way vray decides to divide a scene.

Face/level coef: lower for faster renderings, this will take up much more memory though, can cause max to crash.

Default geometry: this will change the way vrays manages large render with low memory capability, I recommend keeping this on auto.



Vray Settings GUI

Conclusion

Well here we are, not a very visual tutorial I agree, but now you know more about the advanced parameter of vray, and mostly have the ability to start tweaking scenes for optimization, remember every scene is different, there isn't a perfect value for every setting.

If you are getting on with a complex and heavy scene, preferably long before the final render stage; to spend some time testing and tweaking the scene, you can gain a great amount of time having a 1 minute render preview rather than waiting 5, or just knowing how to focus specifically on a certain aspect of the scene, such as modeling, or just AA etc…

Take advantage of saving render settings somewhere on your drive once you find that sweet spot, so that if you ever go too crazy with some settings and forget them later on you have a safe point to go back to, do not be afraid of testing everything but keep an eye on the memory consumption it can become a big surprise once you increase the image size, add textures, or simply enable infinite blurry reflections.

Next a more colorful chapter on lighting!

Eric Ennis

For more from this artist visit
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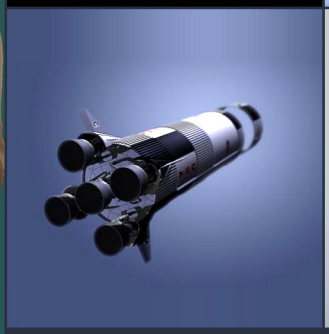


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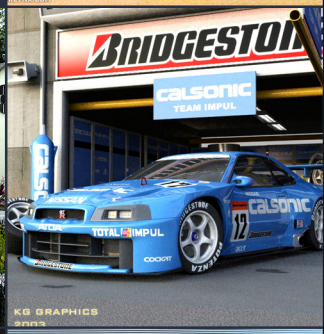



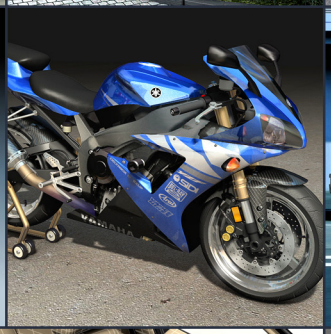
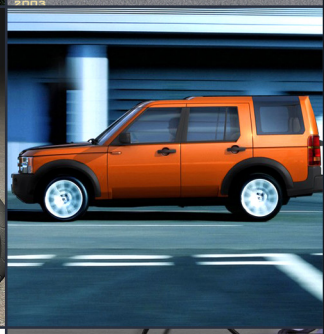

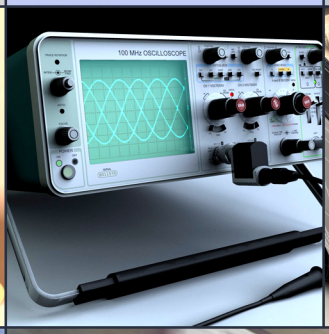




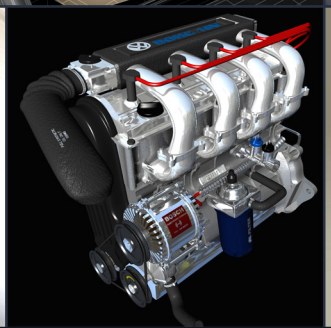



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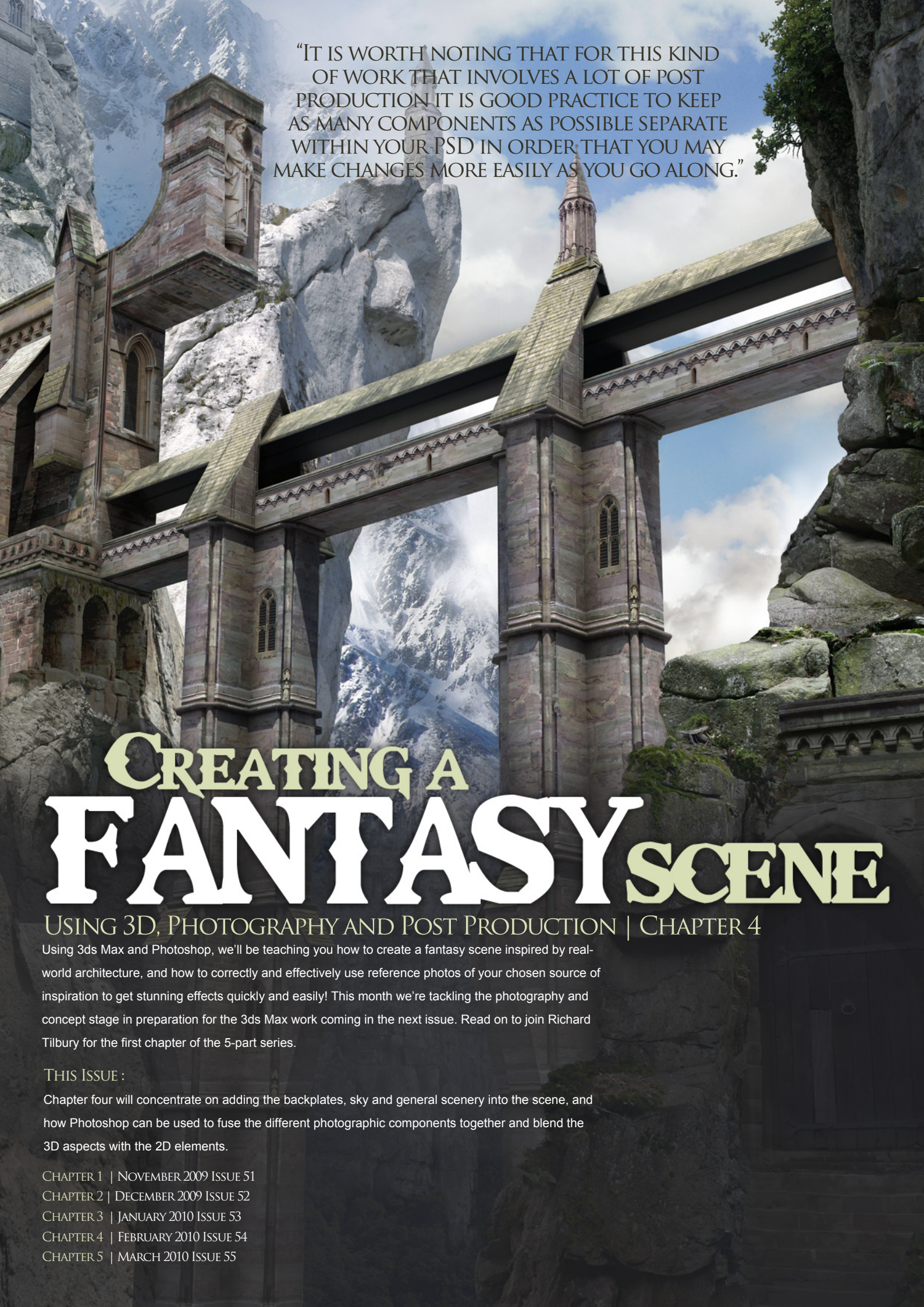

"It is worth noting that for this kind of work that involves a lot of post production it is good practice to keep as many components as possible separate within your PSD in order that you may make changes more easily as you go along."

Creating a Fantasy Scene

Using 3D, Photography and Post Production | Chapter 4

Using 3ds Max and Photoshop, we'll be teaching you how to create a fantasy scene inspired by real-world architecture, and how to correctly and effectively use reference photos of your chosen source of inspiration to get stunning effects quickly and easily! This month we're tackling the photography and concept stage in preparation for the 3ds Max work coming in the next issue. Read on to join Richard Tilbury for the first chapter of the 5-part series.

This Issue :

Chapter four will concentrate on adding the backplates, sky and general scenery into the scene, and how Photoshop can be used to fuse the different photographic components together and blend the 3D aspects with the 2D elements.

CREATING A FANTASY SCENE USING 3D, PHOTOGRAPHY AND POST PRODUCTION: CHAPTER 4

Software Used: 3ds Max and Photoshop

INTRODUCTION

During the course of this tutorial we will build a fictional scene inspired by an existing location, in this case a cathedral. The building itself will dictate the style of architecture used throughout and will essentially be reorganized into a different structure altogether. All of the architectural forms and details will be extracted from the cathedral itself and after being deconstructed shall be reassembled to assume a new design, rather like building with Lego if you like.

The building will then be placed into an imaginary environment and will start its life cycle as a 3d model built inside 3dStudio Max. Our 3d package will be used to create the lighting and perspective as well as setting the camera position / viewing angle.

Photographs taken of the site will then be used to create rudimentary textures used to map the building. 3d Totals free library of reference photographs will be used to construct the scenery in a way akin to matte painting as well as add finer details to the building model.

The final stage of the tutorial process will involve revisiting the location in order to photograph certain parts of the cathedral from specific angles to match the perspective in our scene. These photographs will then be edited and used to add extra detail and further refine our image.

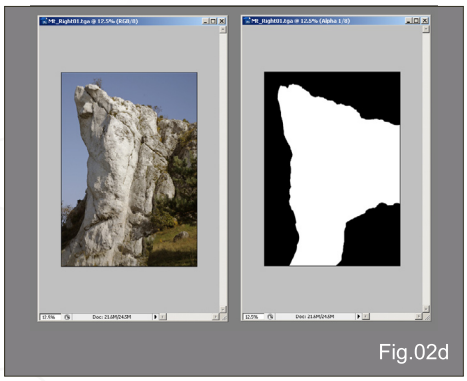
Fig.02d


Fig.01

BUILDING THE BACKGROUND

You may remember back in Chapter 2 that we looked at how to put in some background scenery using 3d planes and alpha channels.

Fig.01 shows the stage the scene is at currently with a provisional rock texture mapped to both the main sections of geometry either side of the bridge. The texture used on the right is only temporary and is used as a provisional guide. It will eventually be replaced with a series of photos later in the chapter and built up in Photoshop.

For now, let's introduce some extra elements to the background. I would like to add a rock formation between the building and the distant mountain and an image I found which was suitable can be seen here:

http://freetextures.3dtotal.com/preview.php?imi=8156&s=c:Rock&p=0&cid=17

This had a good shape and so I first of all added a new plane into the 3d scene onto which the image would be projected just as I had done previously with the background mountain.

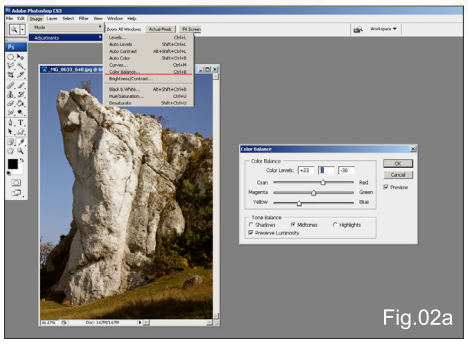
Fig.02a

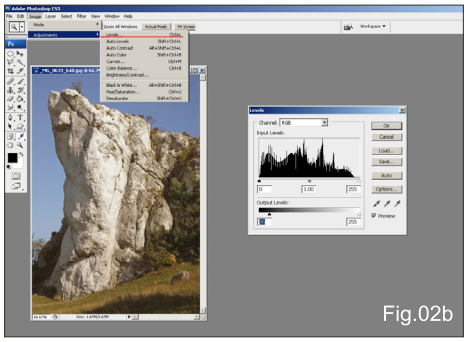
Fig.02b

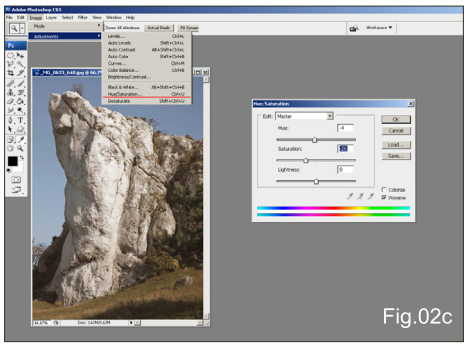
Fig.02c

To match the scene it needed some colour correction which was done in the following order using Image Adjustments.

1. I altered the Colour Balance to add some warmer hues (**Fig.02a**).

2. I altered the Levels to lighten the shadows and reduce the overall tonal range (**Fig.02b**).

3. I modified the Hue/Saturation as shown in **Fig.02c**.

After making these changes I crudely extended the rock using the Clone Stamp and Healing Brush tools in order that it fitted the dimensions of the plane to which it will be mapped in 3ds Max. Once done I made an accompanying alpha channel to hide the sky and shrubs (**Fig.02d**).

It was then saved out as a tga file which carries the alpha channel and then copied into the Diffuse and Opacity slots in Max. The plane was then positioned in the scene behind the building, the result of which can be seen in **Fig.03**.


Fig.03

This concluded the use of actual geometry in the scene in order to construct the background and from now on I will use Photoshop entirely. I wanted to add some even higher mountains behind the building and so once again I trawled the library of free textures available at 3DTotal and came across the following which demonstrated the right kind of scale.

http://freetextures.3dtotal.com/preview.php?imi=8056&s=c:Mountain&p=1&cid=17

I copied a section from the original image (ringed red in **Fig.04**) and pasted it into a new layer behind my building render. I then went to Image – Adjustments – Curves and reduced the contrast to create some atmospheric perspective. You can also see that I flipped the mountains horizontally in order to keep the lighting consistent which in this case comes from the left.

It is worth noting that for this kind of work that involves a lot of post production it is good practice to keep as many components as possible separate within your PSD in order that you may make changes more easily as you go along and be able to isolate specific areas quickly.

For example here in **Fig.05** I have a mask that I can use to quickly separate the building from the background if I wish to crop any photos that are pasted in or if I wish to make any colour corrections to just the building and bridge. I simply applied a white material to the relevant geometry and then rendered it out on a different colored backdrop within the Environment parameters.

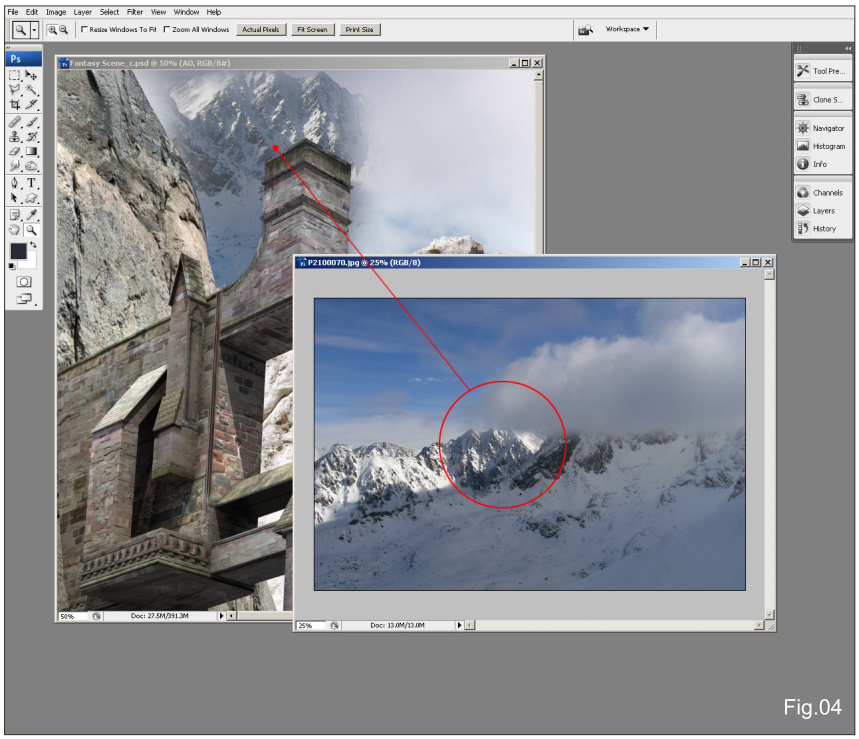
Fig.04

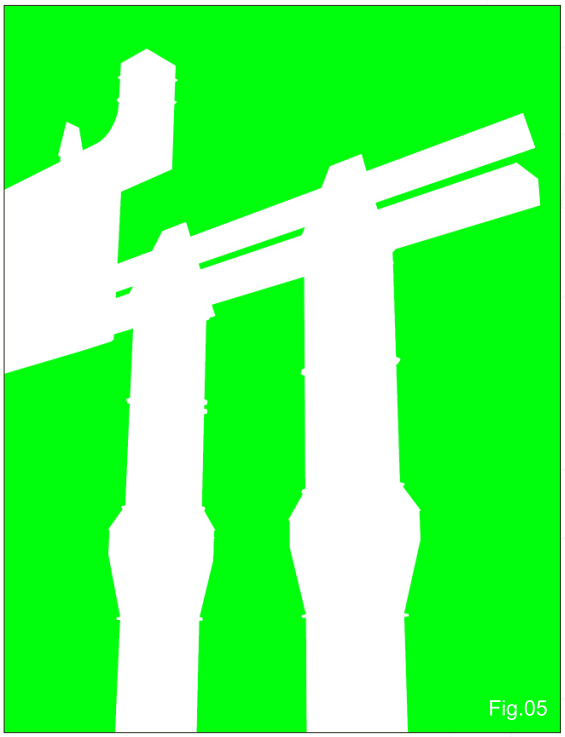
Fig.05

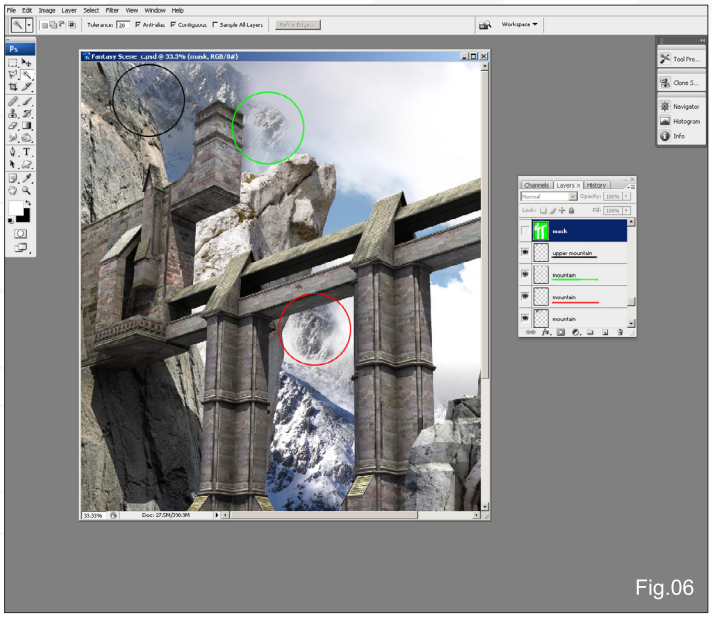

Fig.06

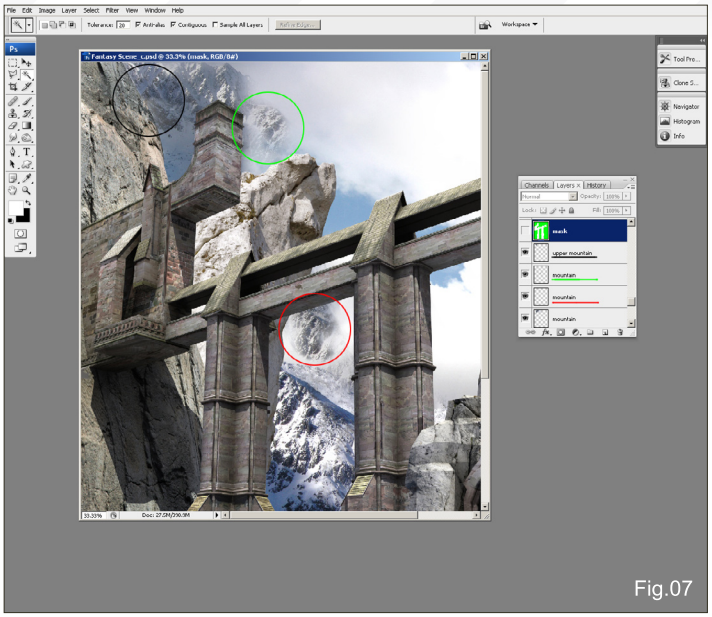

Fig.07

I continued to sift through the library of mountain images and cropped and pasted in sections that fitted in with what I had so far. In **Fig.06** you can see the file structure on the right in the Layers palette with the three extra mountain regions that have been used to elaborate the background. The colored rings correspond to the areas that have been added into the PSD file and once the contrast was adjusted using Image – Adjustments – Curves I used the Eraser tool (with a Soft brush) to create the impression of cloud and help blend the sections together.

The upper part of the background is looking more interesting but the bottom section could do with some refinement so that the snow does not come down quite as low as it does. I looked through the library and found the following photo:

http://freetextures.3dtotal.com/preview.php?imi=8270&s=c:Rock&p=4&cid=17

Using the mask shown in **Fig.05** as a guide, I pasted the image into my PSD and scaled it accordingly. The area in red can be seen next to the right column. Once done I used the Eraser to soften the top edge and blend it with the snowy mountain using a Soft Round Brush. **Fig.07**

I reviewed the sky and thought that it looked a little uniform and so found a good photo to help add some interest:

http://freetextures.3dtotal.com/preview.php?imi=8531&s=c:Skies&p=4&cid=17

You can see the middle are of blue sky in the above image which is apparent in **Fig.08**. The black area in the left image shows where the sky has been used and blended with the original that is mapped onto the back plate. To create a clean edge that corresponds to the foreground rock face you can render out this section of geometry in a flat color as we did with the bridge in Fig05. You can also see that I have added some trees between the columns and an extra section of mountain (compare to **Fig.06**).

Whenever you paste in sections of different photos it is important that you color correct them by way of Image – Adjustments which was touched upon in Chapter 3.

My normal procedure is to start with Curves and adjust the tonal range and contrast to match the

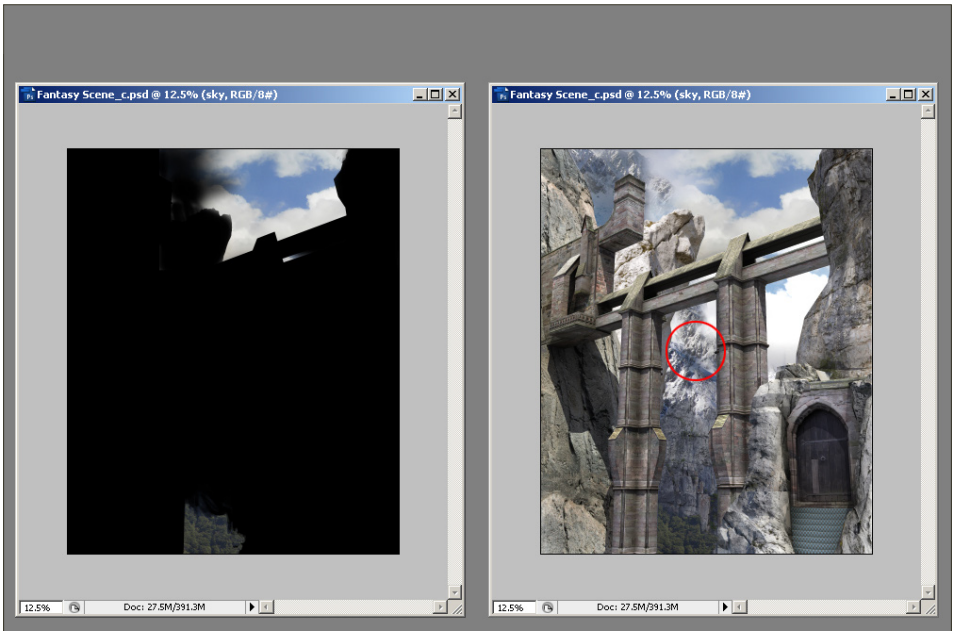

Fig.08

host image, followed by Brightness/Contrast if necessary and then I either use Color Balance or Hue/Saturation to correct the color.

The key modifications are all found under Image – Adjustments and I usually use a combination of these depending on the context:

1. Curves
2. Levels
3. Brightness/Contrast
4. Color Balance
5. Hue/Saturation

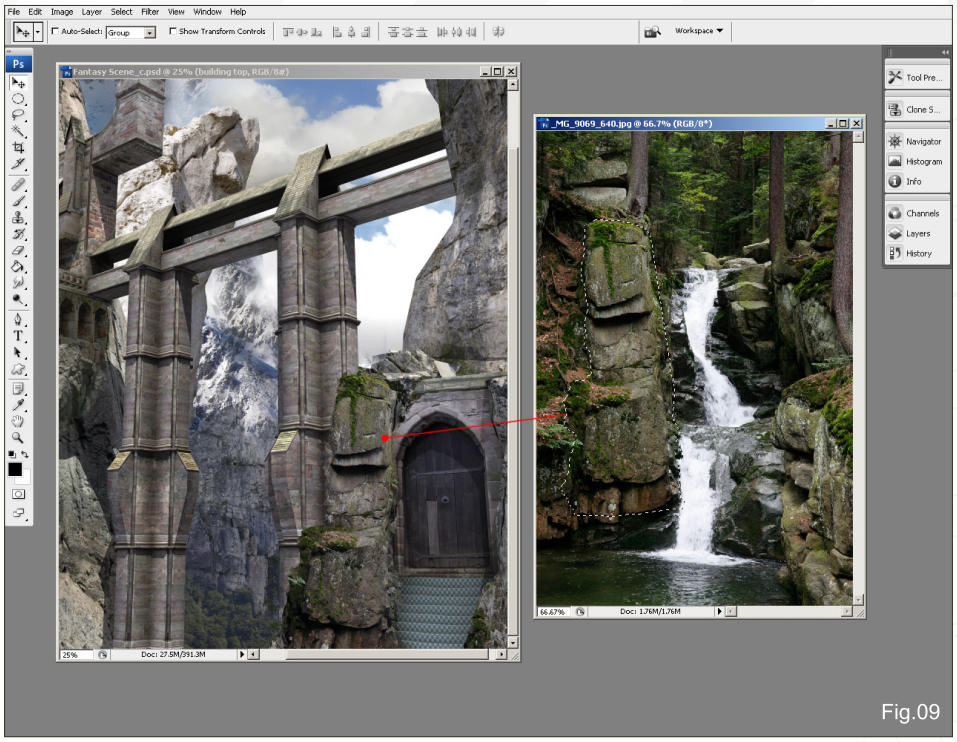
Fig.09

FOREGROUND

As mentioned earlier the foreground rock face will be built up in Photoshop and was started by using the following image from within the Mountain Forest category in the Nature library:

http://freetextures.3dtotal.com/preview.php?imi=8107&s=c:Mountain_Forest&p=0&cid=17

It is important that you consider the lighting and choose source material that is either neutral i.e. photographed under a diffuse light with no harsh shadows, or ones that already demonstrate lighting conditions that closely match the original plate.

In this case the rocks are shaded by a canopy of trees and as such just display a general ambient light being cast from above.
I selected an area highlighted in **Fig.09** and pasted this in beside the door and then used Image- Adjustments-Color Balance to increase the red hue and reduce the greens. I rotated it to more closely match the geometry and then used the Eraser to trim the edges. The main shadow is evident under the uppermost block of rock which fits in with the scene.

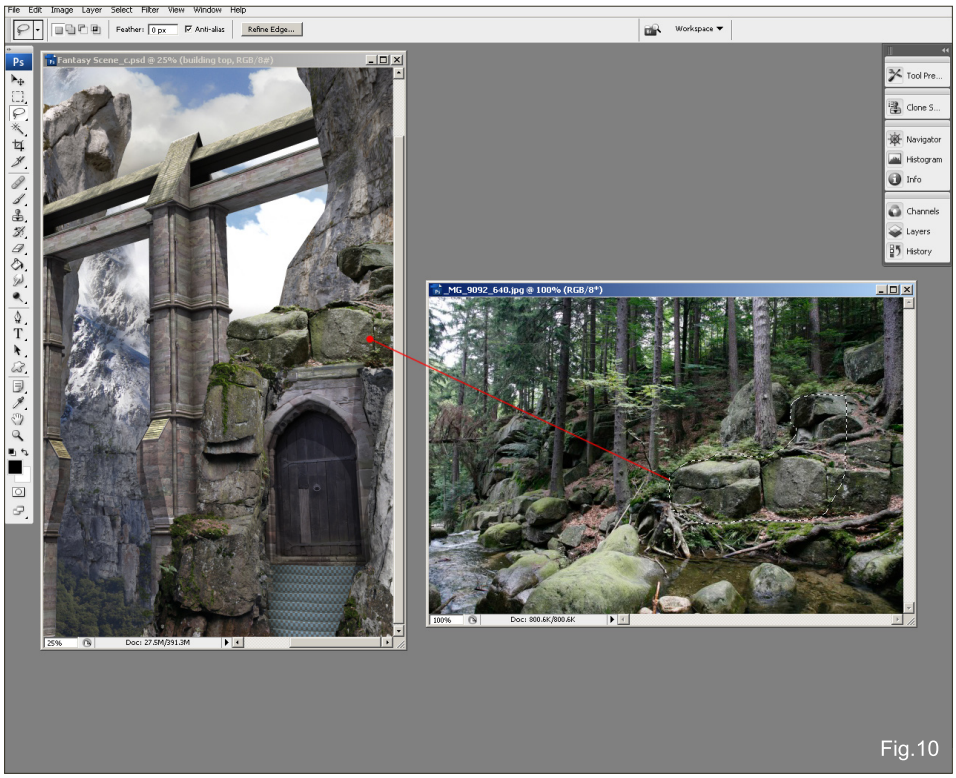
Fig.10

The second image I used to create the stone section above the door can be found here:

http://freetextures.3dtotal.com/preview.php?imi=8125&s=c:Mountain_Forest&p=0&cid=17

In **Fig.10** you can see another example of how a section of the right image has been blended into the scene. It is best to paste in a roughly accurate selection area into your main plate and then refine it within the actual scene using the Eraser. Again this was color corrected slightly to add a warmer hue using Color Balance.

The third image I sampled can be found here:

http://freetextures.3dtotal.com/preview.php?imi=8123&s=c:Mountain_Forest&p=0&cid=17

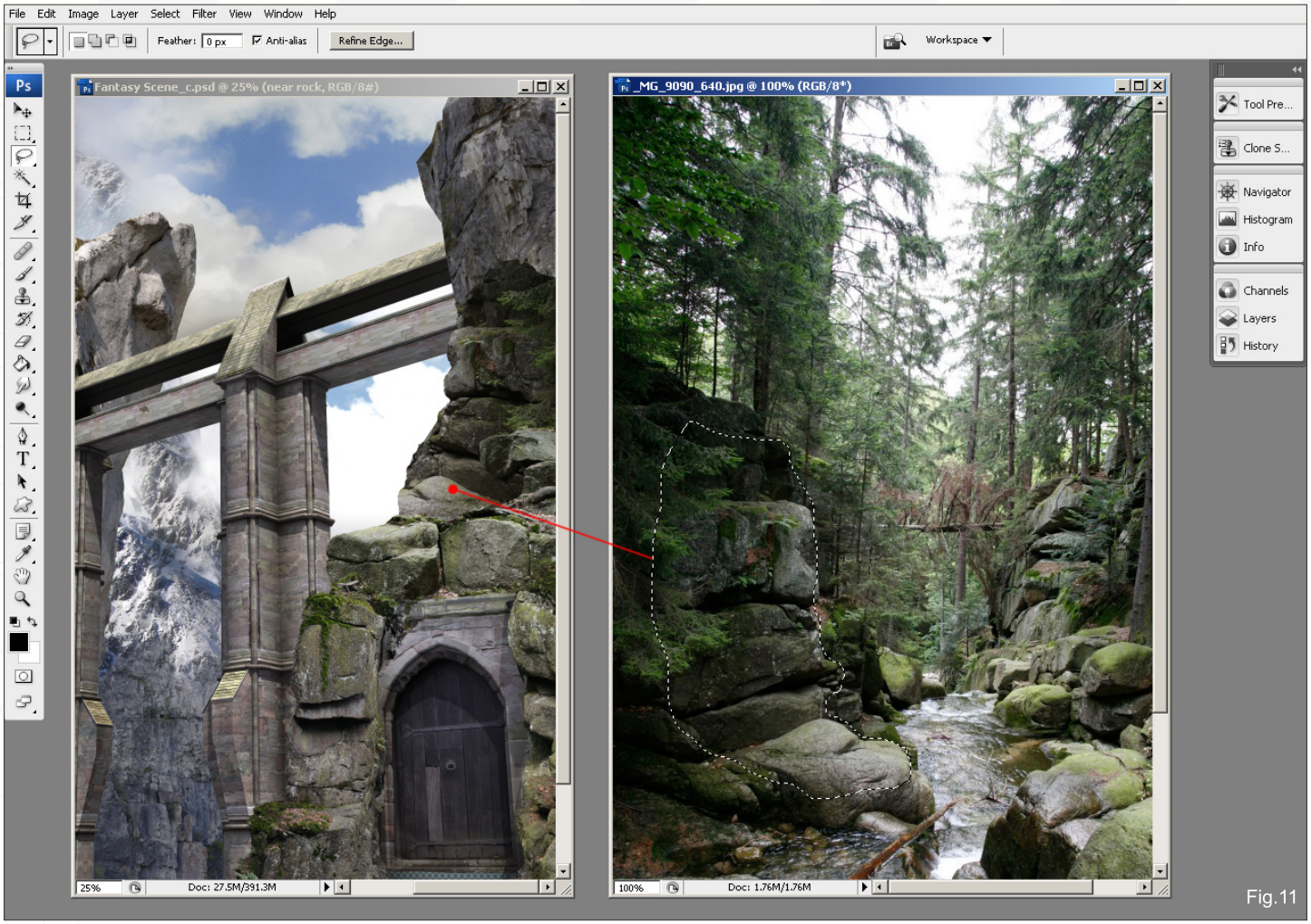

Fig.11

I took a rough crop approximating the area on the right and then flipped it horizontally and placed it in the mid section (**Fig.11**). You can see that I have utilized the shaded area at the top of the cropped section to create a natural crevice in the scene.

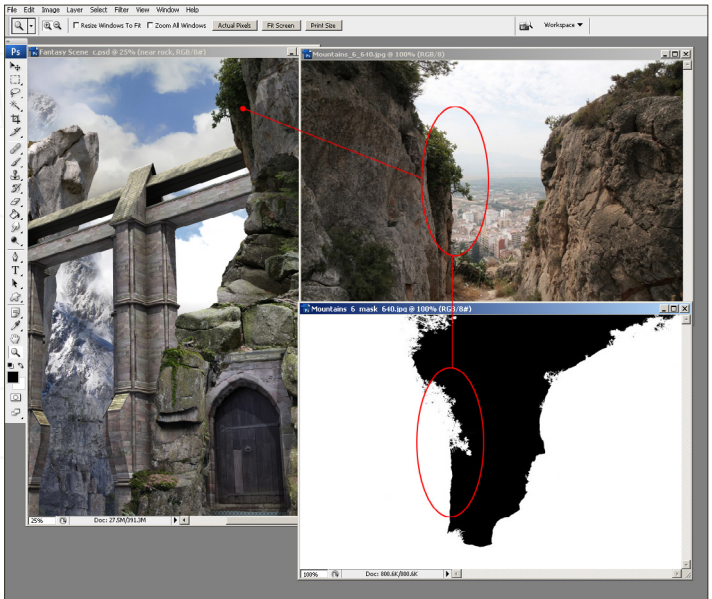
Fig.12

The remaining upper section still requires some work and in this case I used an image form the Matte painting category of the library. All of the images here carry a black and white mask making it easy to isolate the most prominent components; in this case the edge of mountain pass.

http://freetextures.3dtotal.com/preview.php?imi=6244&s=c:Environment_Mountains&p=0&cid=13

In **Fig.12** you can see how I have used the accompanying mask to quickly isolate the shrub and rock which have then been copied into the scene and flipped horizontally.

You will notice that I have decided to leave part of the temporary rock texture that was projected onto the geometry as it seemed to work quite well. This was not intentional but rather a happy accident but it is always worth taking advantage of these opportunities.

Once each of the component photos are in place and have been color corrected it is often necessary to use the Clone Stamp and Healing Brush tools to blend them together and conceal any obvious seams as we did in Chapter 2.


Fig.13

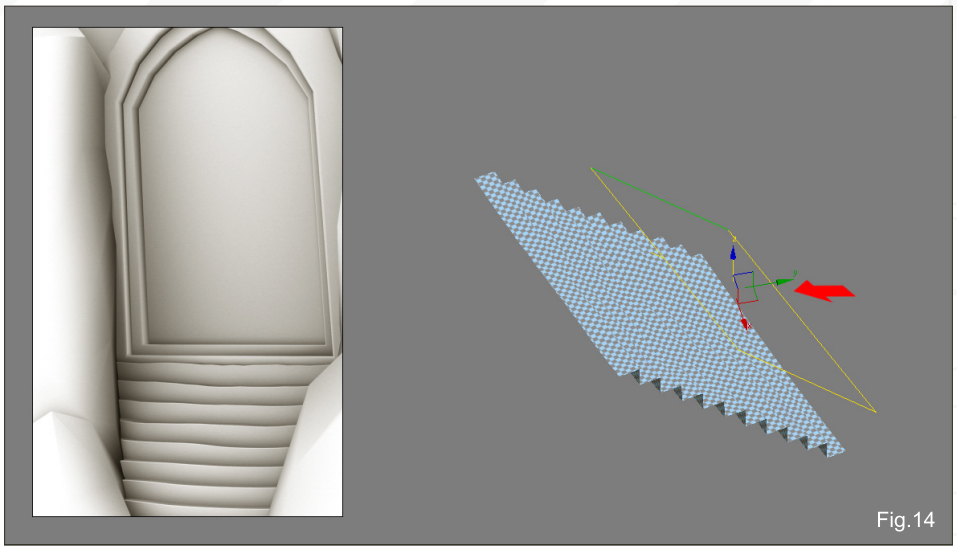
Fig.14

Another detail which I added to the foreground to create some interest was the decorative carving above the door which was taken from the following photo:

http://freetextures.3dtotal.com/preview.php?imi=12335&s=c:Church&p=8&cid=3

It was first scaled and skewed to match the perspective (Edit – Transform) and then color corrected (Image – Adjustments – Color Balance- **Fig.13**).


Fig.15

The last remaining area that needs obvious attention is the staircase which can be done in either one of two ways. A stone texture can be pasted in from a photo and then the shadow from the Ambient Occlusion map used to create the volume (left in **Fig.14**) or alternatively a stone texture can be projected onto the geometry in the 3d scene (right in **Fig.14**) and the light rig used to generate the shadows.

Either way will work and in fact there is no reason why you cannot combine the two approaches by first mapping the geometry and then enhancing the shadows by overlaying the AO map.

Here is the result of mapping a stone texture roughly onto the steps and then overlaying the AO map which is set to Multiply at around 68% opacity (**Fig.15**).

We have now built up most of the background and foreground scenery now but one area that needs addressing is the shadow below the building. It would look better if the building were supported by a rock outcrop as it looks a little precarious. I scoured the library once again and found the following image:

http://freetextures.3dtotal.com/preview.php?imi=8151&s=c:Rock&p=0&cid=17

I chose this particular image because it suited the scene geography. The rock was shaded on one side and showed a natural angle that I could exploit effectively.

In **Fig.16** you can see the process used to blend the rock in which involved flipping it horizontally in order to match the lighting.

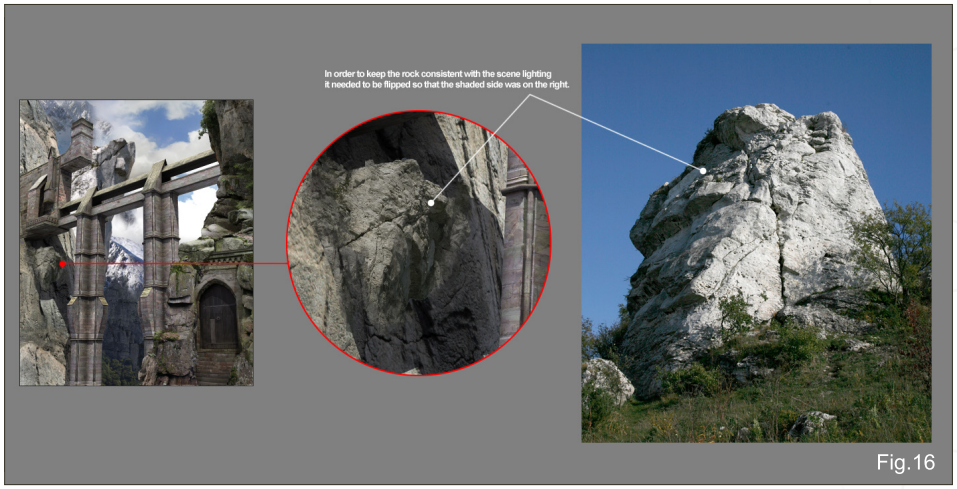

Fig.16

To link this new outcrop to the building I opted to use a photo I took at the cathedral location which can be found here:

http://freetextures.3dtotal.com/preview.php?imi=12221&s=c:Church&p=8&cid=3

These arches were almost photographed at the right angle and so needed a minimal amount of skewing to fit.

Once correctly scaled and in position I reduced the brightness and contrast (**Fig.17**).


Fig.17

This added a structural support to the base of the building and helped bind it more successfully to the rock face but there was now a noticeable hole along the side. To fix this I selected a photo of an arch (**Fig.18**) and then went to; Edit – Transform – Skew and fitted it in with the scene perspective.

I then reduced the brightness and contrast and blended it in with the Clone Stamp tool.

This concludes this chapter which has shown how by using Photoshop and a careful selection of photos, we can build much of the eventual scenery in both the foreground and background.

Next month we will complete this series by using the perspective in our scene as a guide to taking further photos that can be used to add some extra details. We will also add some additional refinements and finally use Photoshop to pull all of the elements together.

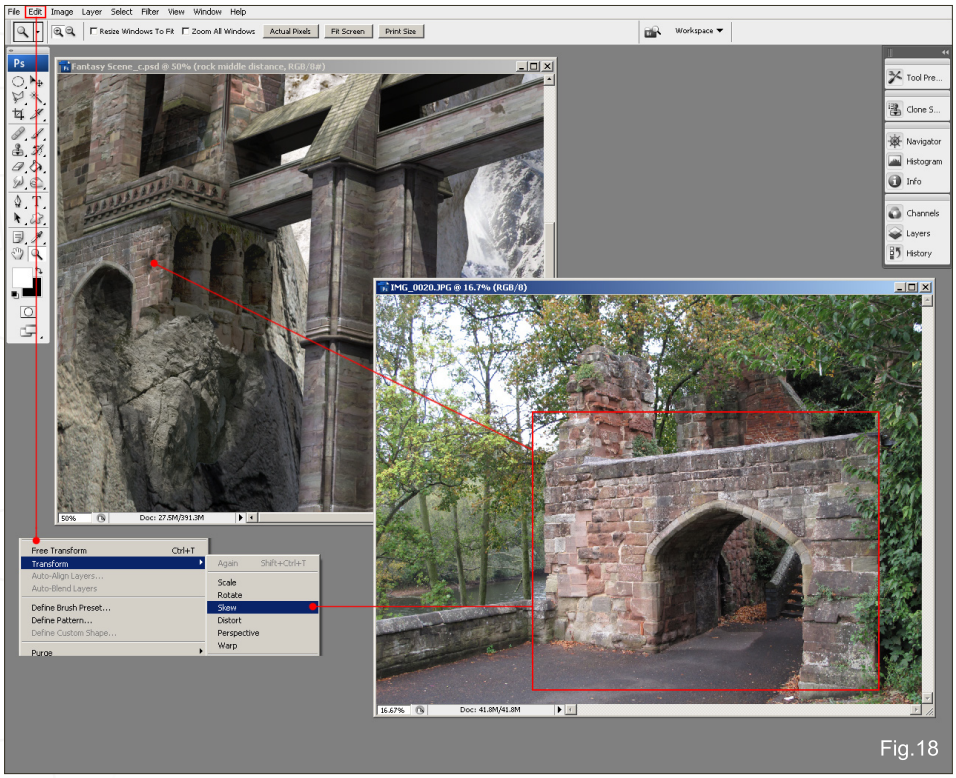

Fig.18

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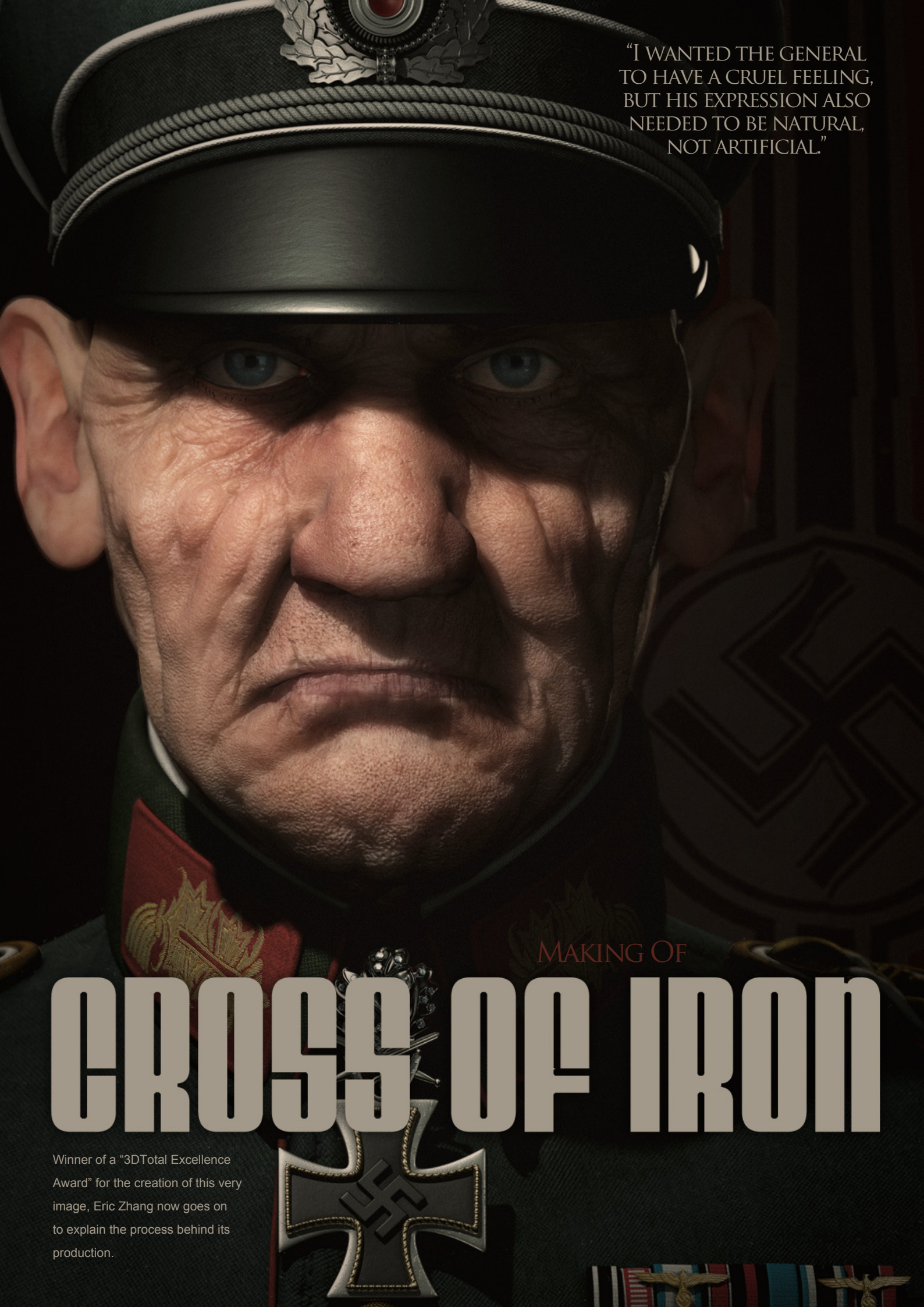

"I WANTED THE GENERAL TO HAVE A CRUEL FEELING, BUT HIS EXPRESSION ALSO NEEDED TO BE NATURAL, NOT ARTIFICIAL."

MAKING OF

CROSS OF IRON

Winner of a "3DTotal Excellence Award" for the creation of this very image, Eric Zhang now goes on to explain the process behind its production.

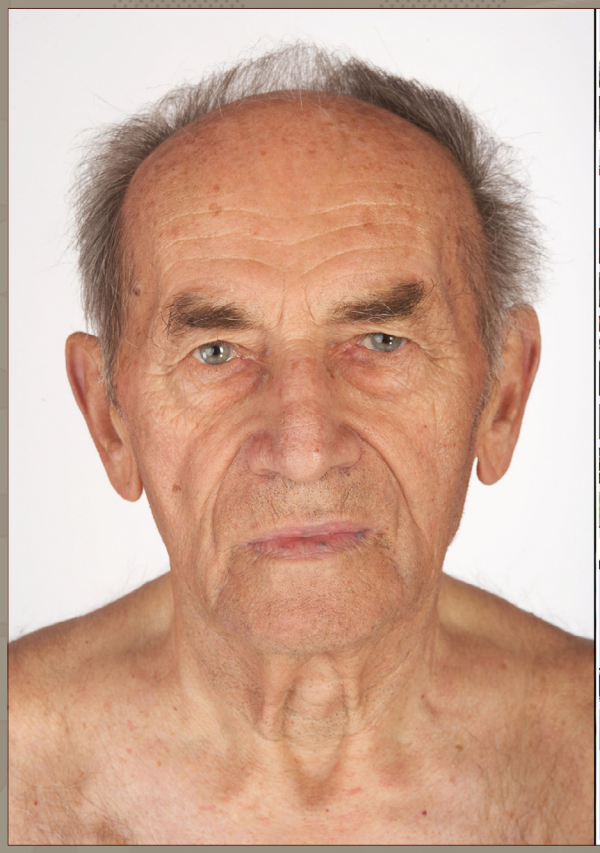

Fig.01

CROSS OF IRON

Software Used: ZBrush, Maya

INTRODUCTION

I am a big fan of military topics. Since I had already done a soldier, this time I wanted to try a World War II German general.

REFERENCE

Because this character was based on the real world look-and-feel, I didn't draw any concepts for it. Therefore, I needed a ton of references instead. I found an old man reference from 3d.sk which I decided to use for my character; the reason was simply that it was a perfect reference to practice my ZBrush sculpting skills with and would also fit my character pretty well (**Fig.01**).

MODELING

I created a plane in ZBrush with the reference image as the texture. Then, I started to model the head from a sphere. It's much easier to get the right proportion if you have an image plane (**Fig.02**).

After I'd roughly done the sculpting, I exported a high-poly OBJ file to Maya and started to do re-topology. This is a very important step if you want your model to be used for real production. Modeling is only the first step of the production process; there is a lot of work after that, such as unwrapping, rigging, animation, etc. If you can keep your wireframe clean and appropriate, it will make everyone's life much easier. I used a Maya plugin called "Nex", which is a very nice

Fig.02

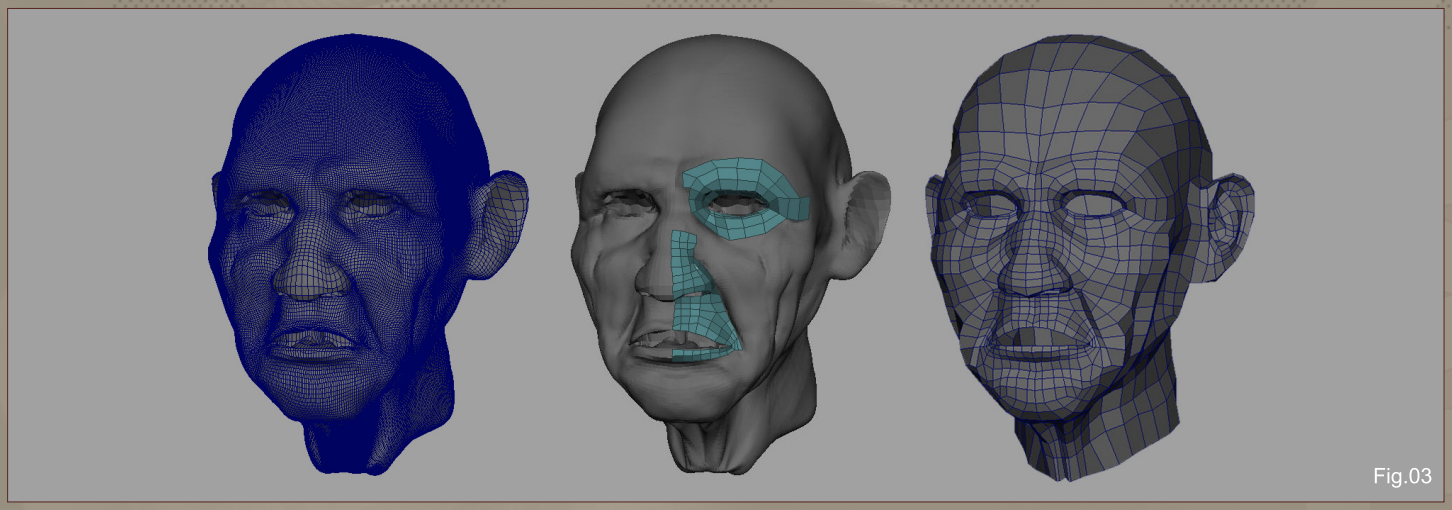

Fig.03

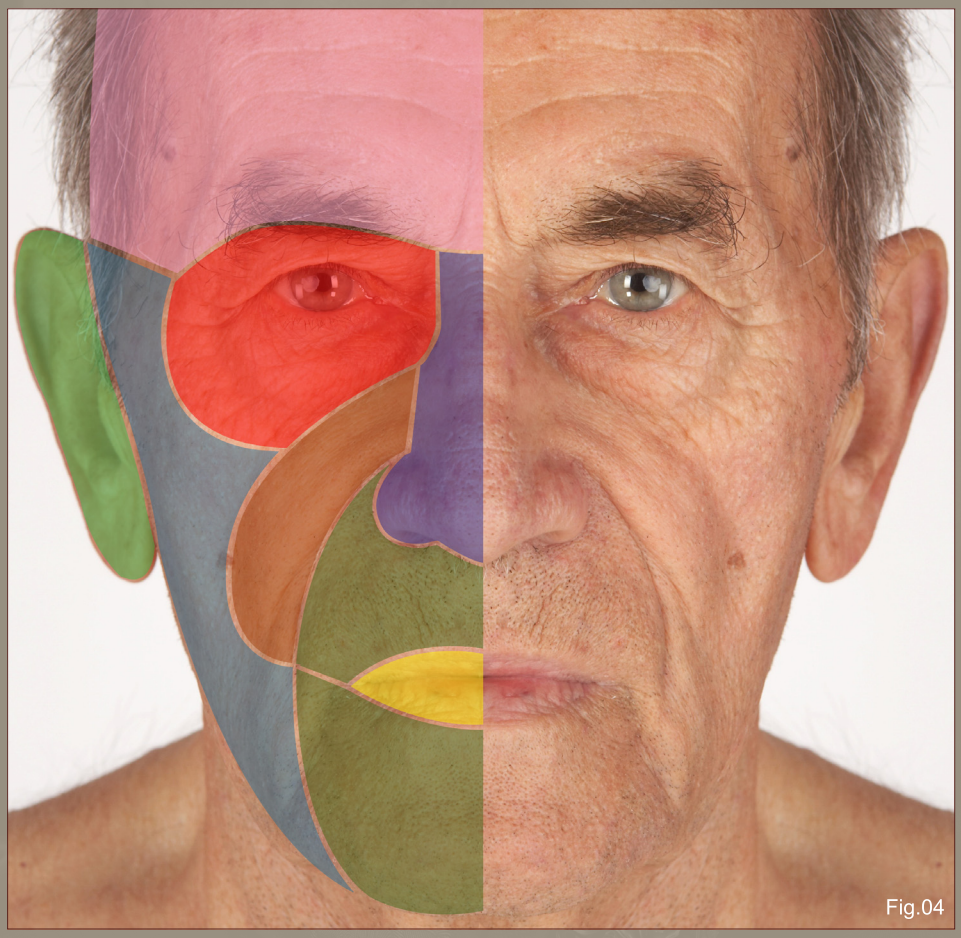

Fig.04

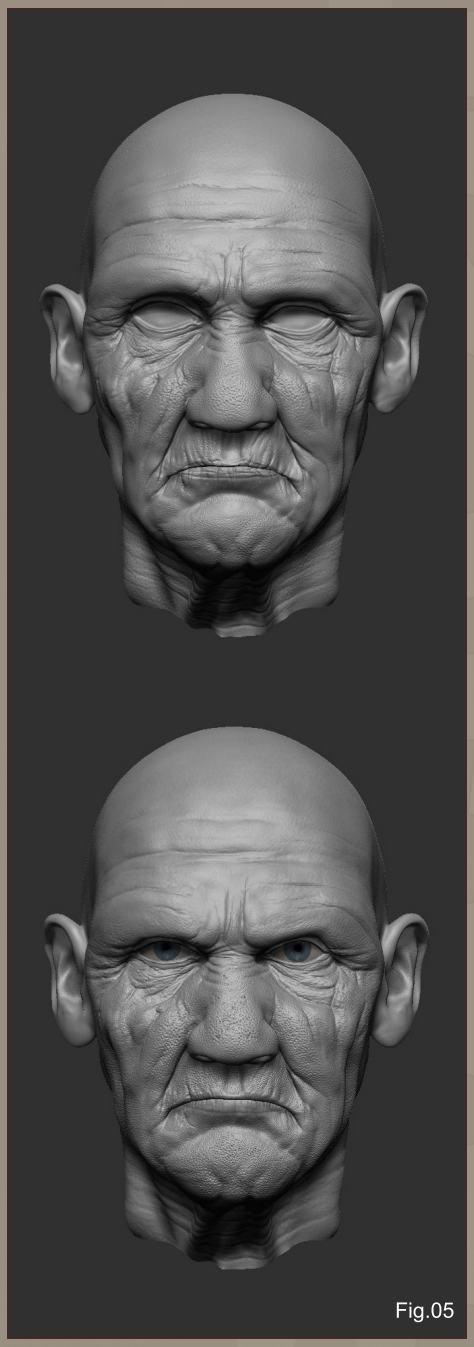

Fig.05

tool to do re-topology with; using this plugin will keep your polygons in quads and evenly-spaced easily (**Fig.03**).

After completing the re-topology process, I exported another OBJ file and went back to ZBrush. With clean edge-loops, this time I was finally able to work on the details. There's one thing I'd like to point out at this point: each area of the face has a particular skin texture. It's important not to use the same texture everywhere because it will look unrealistic (**Fig .04**).

It was now time to give the general an expression. I wanted the general to have a cruel feeling, but his expression also needed to be natural, not artificial. So I made some subtle changes (**Fig.05**).

I don't have much to say about the uniform; I just carefully referred to my references and made sure that after I put every single piece back together, it would still look and feel like a German general's uniform (**Fig.06**).

Ok, so that brings me to the end of the modeling part, so I'm just going to summarize my workflow so far (**Fig.07 – Fig.09**):

1. Start from a simple mesh
2. Deform this simple mesh to match the reference
3. After getting the correct proportion, use re-topology technique to make wireframe nice and clean
4. Sculpt every detail until you get the final result you want
5. Give a facial expression

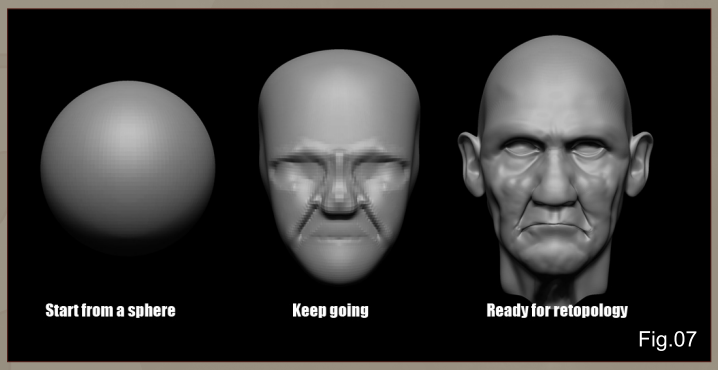

Fig.07

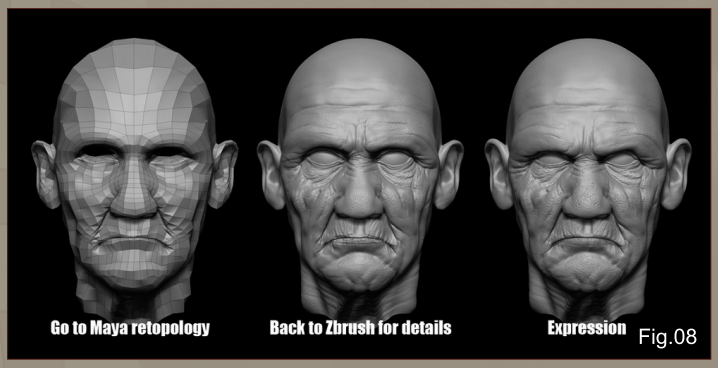

Fig.08


Fig.06

Next I exported a low-poly OBJ, a displacement map and a normal map from ZBrush to Maya. With those three elements, I was able to exhibit a very highly detailed model with just a low-poly geometry. The low-poly geometry gives a clean and simple wireframe. The displacement map gives further detail base on the low-poly geometry, and the normal map gives the final, super-fine detail base on the displacement map (**Fig .09**).

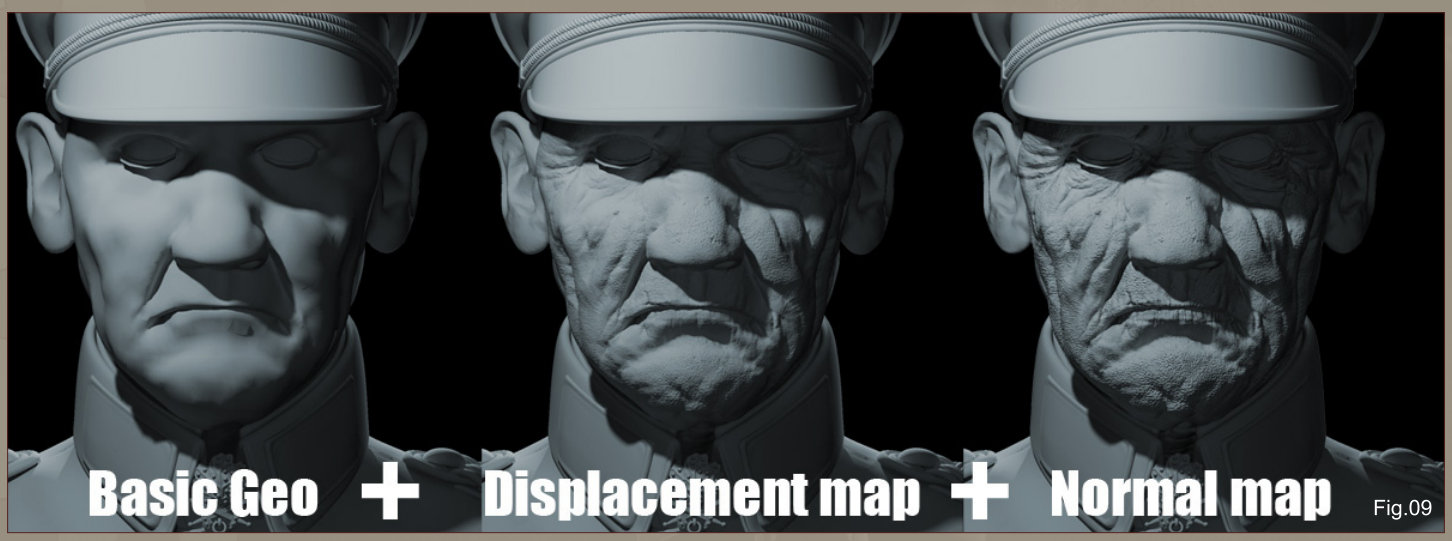

Fig.09

LIGHTING

The light setting was fairly simple. I used four lights - a key light, a rim light and two bounce lights – which gave me the illumination I needed. I gave the rim light a blue color to make the lighting more interesting. The eyes shining under the shadow gave a creepy feeling (**Fig. 10**).

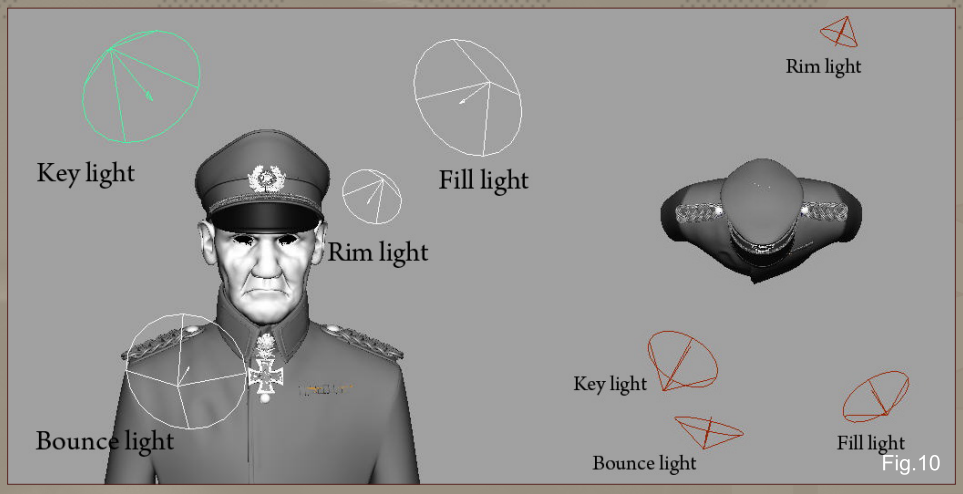

Fig.10

TEXTURING

I used "Zapplink" to paint the color map - it's a free plugin for ZBrush and is a perfect tool to paint organic models. I painted all the other maps based on this color map (**Fig. 11**).

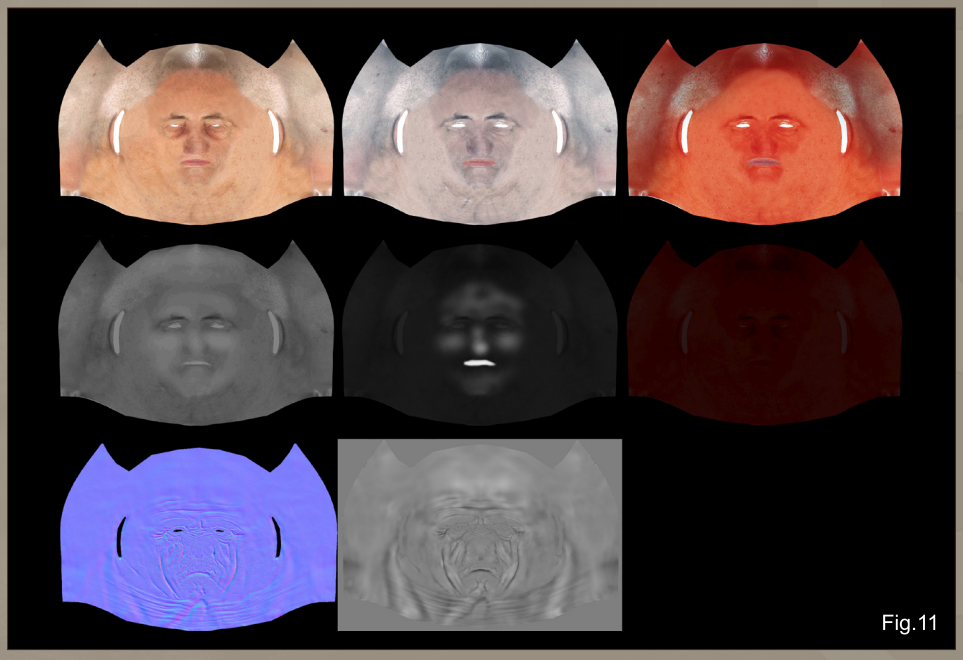
Fig.11

SHADING

I used MiaSSS fast skin shader for the skin, and gave the epidermal a light blue color and subdermal an orange; I put the real skin color on the overall color (**Fig.12**).

COMPOSITING

After rendering, I was then at the final step of this image. Compositing is a very important step towards the final result. Here I tried to give the image an aged, old TV, photo feel (**Fig.13**).

I hope this Making Of was helpful to you. Thank you for reading!

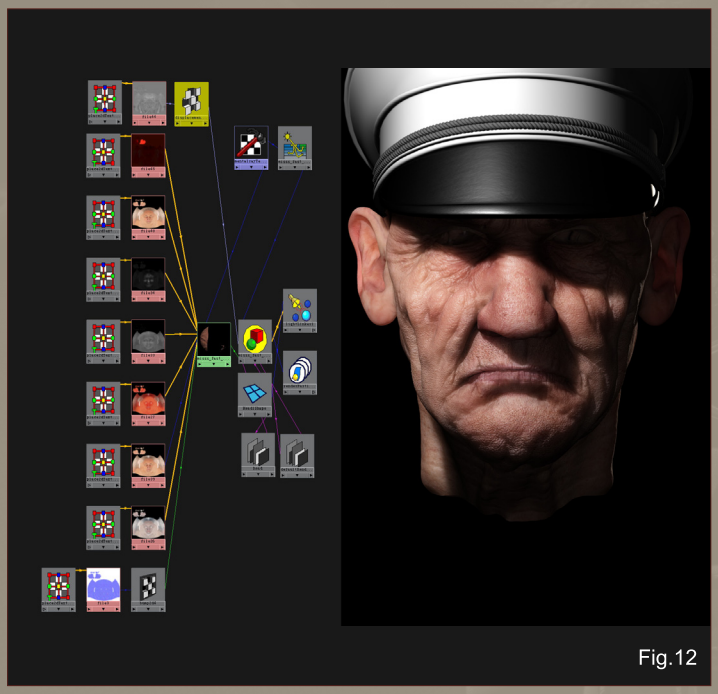
Fig.12


Fig.13

ERIC ZHANG
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Digital Art Masters Volume 4

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This month we feature:

"Rajun' Cajun' Jug Band"

by Gregory Callahan

The following shots of the “Rajun’ Cajun’ Jug Band” book pages are featured here in full-resolution and can be read by zooming in...

Rajun’ Cajun’ Jug Band

By Gregory Callahan

Software Used: ZBrush

Introduction

Rajun’ Cajun’ Jug Band started from a sketch I did of an old hillbilly gold miner. My original idea was to sculpt an old gold miner striking gold, eyeing his golden nugget, but as I was blocking him out a friend of mine mentioned that he looked like a hillbilly and that he should be holding a banjo rather than a gold nugget. I continued to pursue my original idea, but after hearing his suggestion all I could see was this hillbilly with a banjo ... so I went with it! After completing the old hillbilly playing the banjo I didn’t want to stop, so I set out to design more characters thus making up the *Rajun’ Cajun’ Jug Band*.

Fig.01

Composition & Style

Once I’d decided I wanted to make a band of characters, the main focus became the overall composition. I really wanted to make the characters look as if they were all playing to the same tune and interacting with each other. Since Pappy (the old hillbilly) was the first character I designed, he really set the tune for the rest of the band (no pun intended). Shapes played a big part in the composition. I wanted each character to have a very distinct silhouette: Pappy being tall and skinny, Uncle Bob big and round, Bobby Sue being curvy, and so on. Another element I really wanted to add was animals and critters. They add great contrast to the human characters and no classic cartoon is complete without animals that can walk on two legs – the gator being the Cajun’ equivalent to the watch dog, and the crawdad a Cajun’ favorite finger food.

Fig.02

The basic style for this project was influenced by childhood memories of classic Warner Bros. cartoons. Having grown up watching countless hours of Chuck Jones and Tex Avery cartoons, my style has always borrowed something from the classic 2D animation masters. Knowing this, I made a point not to reference any classic cartoon characters in this piece. Instead, I used photos of unique people and made characterizations based on memories of some of my favorite childhood cartoons. I also did quite a lot of research on jug bands and found that there are a few basic instruments needed to complete the band: a banjo (Pappy), washboard (Uncle Bob), washtub base (Granny) and of course a Jug (Little Bobby Joe). Each character was designed around the instrument they play.

Workflow

The initial execution of this project was not as smooth as I usually like it to be. I normally start off with a line drawing concept based on a combination of references I gather, and several other quick sketches I do to get my ideas down on paper. In this case, however, I tried to design both the characters and composition on the fly, since the idea evolved from one character. After finishing the first two characters – Pappy and Gator – I hit a stumbling block and could see this approach was not going to work. I then went back to the drawing board and sketched out a few compositions, as well as a quick color key (**Fig.01**).

Fig.03

Fig.04

From there I continued on with my basic pipeline that I use to create just about every character I do. For the most part I try to work in ZBrush as much as I possibly can. In this case, I would say 98% of it was completed in ZBrush, with the exception of using Photoshop for texturing and color correction. All base meshes for each character were created using a series of ZSpheres to rough in my basic pose. Once I was satisfied with the pose, I converted the mesh to a low-res mesh, which was then fine-tuned by adding additional geometry where more detail would be needed.

The mesh was divided into one to two more subdivisions and the Move tool was used to push and pull the geometry to help better define the character’s silhouette. At this point, major features for the character were readable and represented the overall expression of the face, hands and body language. I would say this is the most important stage in the sculpting workflow. Much like a line drawing, if the model does not read well at this stage, all the details (wrinkles, textures, etc.) and colors added in the final stages are not going to help.

The last stage is by far my favorite – the details. This is where you can go crazy with all the minor details, like folds and wrinkles, and in this case the alligator skin, and so on. For the purposes of this piece I kept it somewhat simple. I wanted to stay true to the cartoon style and focus on major details, letting the viewer fill in

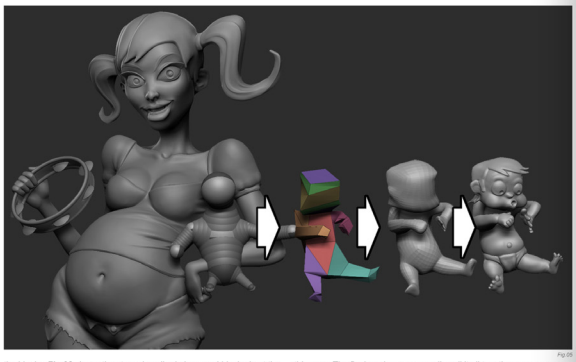

Fig.05

the blanks. **Fig.02** shows the steps described above as I blocked out the crawdad character to the final detail passes; **Fig.03** illustrates the work in progress stages of the alligator; **Fig.04** shows the sculpting progress of Pappy’s head; and finally **Fig.05** illustrates the creation of Little Bobby Joe.

Finishing Touches

Once I was satisfied with all the character sculpts, I proceeded to texture each character. Again my approach was to keep it simple. The idea here was to not let the detail in the textures take away from the detail of the models, and so they were all hand painted using a combination of Photoshop and ZBrush. As you can see in **Fig.06**, the textures are basically a flat color with a dirt pass – nothing special. Less is more in this case. The final render passes really pull it all together; as you can see, a combination of a flat diffuse, depth, rim light and specular render provide a polished final result.

Conclusion

One of the satisfying things about doing personal artwork is being your own art director and having the freedom to experiment with different concepts and techniques. With that being said, I had a blast making the *Rajun’ Cajun’ Jug Band*. It helped remind me why I love making characters so much. I find it enjoyable to create artwork in which the characters come to life. I like to think I create characters with character, and in this case people have told me they can practically see and hear this cast of characters – mission accomplished!

Fig.06

Artist Portfolio

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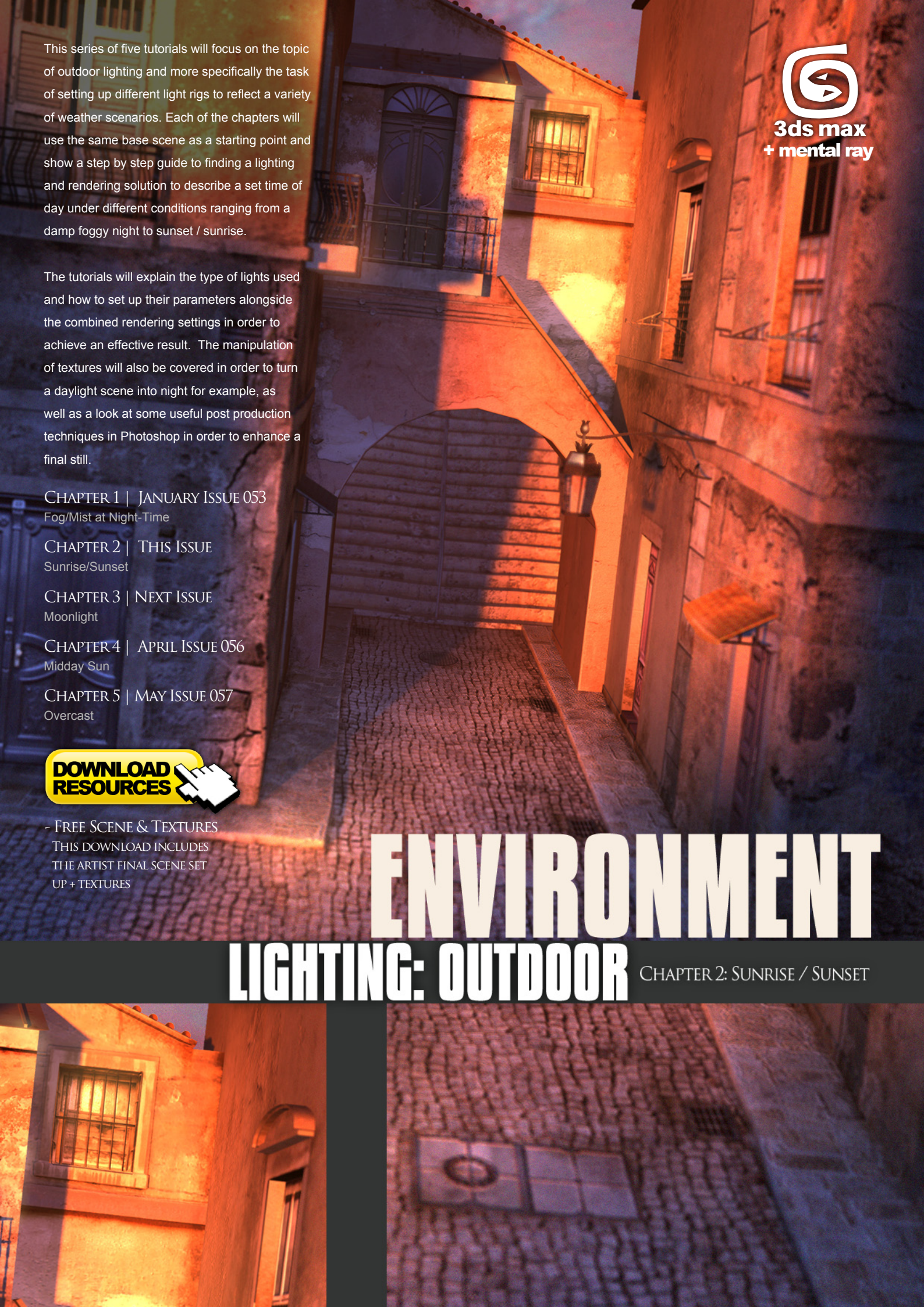

This series of five tutorials will focus on the topic of outdoor lighting and more specifically the task of setting up different light rigs to reflect a variety of weather scenarios. Each of the chapters will use the same base scene as a starting point and show a step by step guide to finding a lighting and rendering solution to describe a set time of day under different conditions ranging from a damp foggy night to sunset / sunrise.

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3ds max
+ mental ray

ENVIRONMENT
LIGHTING: OUTDOOR

CHAPTER 2: SUNRISE / SUNSET

CHAPTER 2 - SUNRISE / SUNSET

Software Used: 3ds Max + Mental Ray

INTRODUCTION

During this exterior lighting series I will be covering the techniques I used to create various time and weather conditions using 3DS Max and the Mental Ray renderer. I will be concentrating on describing my lighting methods rather than any modelling or texturing that may need to be done. I have created as much of the image as I can in Max; leaving the Photoshop 'polish' to a bear minimum to achieve the final result.

Before I start lighting any scene I collect reference for the type on lighting setup I want to create. So I'll do an internet search for sunsets, this will bring up a lot of images so there's plenty of reference to get a good end result.

I want to create something interesting and imaginative for this scene, when searching the internet you will get a lot of the more traditional golden mediteranian sunsets. So we need to refine our search a bit to get something more interesting. Sunsets can be quite colourfull depending on many factors such as; time of year, location and weather. In my mind I'm thinking of deep reds, purples and blues maybe something like Russia. So I'll do another search for sunsets in Russia or colder locations. This gives me a lot of useful reference to use to show me the colours I need to get into my scene.

IDENTIFYING LIGHT SOURCES

For a sunset environment we will need to rely on the natural lighting to illuminate the scene. This will mean we will need to be imaginative with the main source of light in order to create something interesting. There are two places I would expect the sun to be in this image, the first is behind the building allowing the sun light to cascade down the stairs. This will give us a nice shadow of the archway but the downside of this sun position is that the rest of the image will be in shadow and I fear will create an uninteresting image and allow all the detail in the buildings to be lost. Also this will restrict us and in the end restrict our creativity. The second position for the sun is from behind the camera pointing at the front of building. This will give us a lot of light to play with and keep all our detail in the buildings.

Here is the raw image in the Max view port (**Fig.01**).

Fig.01

The archway and stairs are central to this image; the shadows in this scene should be very soft so I used MR-Area lights to light the entire scene. These lights give us the ability to create soft diffused shadows helping to create the illusion of the soft light being cast by the sun.

THE WEATHER CONDITIONS

The weather changes the lighting in the environment so we need to think about what kind of weather we want. I think an almost clear sky with thin whispy clouds high in the sky and near the sun. As the sun is behind us we will get a nice glimps of blue at the top of the image from the small amount of sky that is visible. This will add a lot to the final image. I will add some slight environment fogging to give us some atmosphere and add depth to the image making the end scene more believable and realistic.

SETUP DRAFT RENDER

When lighting any image, you can't expect to achieve the final result first time. In anticipation of a lot of 'tweaking', I did many test renders. As this could potentially be very time-consuming, I setup the renderer to a draft setting so it speeded up the render times to a more workable rate. I set the render size to 360*480 and in the inderiect illumination tab I set the Final Gather to draft and the bounce light to 0. This will allow me to render out as quickly as possible.

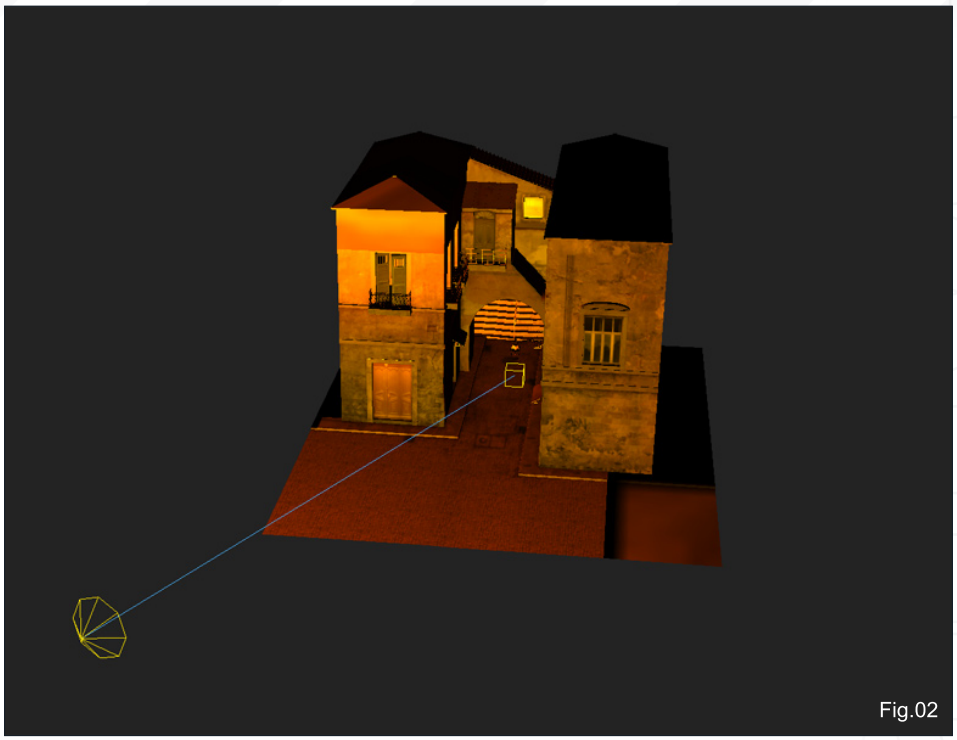
Fig.02

SUN LIGHT

For the sun light I will use a MR-Area Spot light and point it down the alley way I set the sunlight multiplier to 3 and enabled area shadows this would give us a soft shadow. And gave it a warm red/orange colour.

Here is an image of the position of the light in the scene (**Fig.02**).

Here is a render of what we have so far with just the sun light applied. (**Fig.03**).

I like the colour of the sunlight being cast but I feel it is to over powering and the whole scene is washed out and un interesting. A good way of adding interest to a scene is to add shadows this serves two purposes. One being it will break up the mass of light being cast over the scene adding some interest. Second it will create the illusion of a environment behind the camera further adding realism to the image. This is a very simple process and gives us a lot of reward so is well worth doing.

I started by creating two simple boxes and positioning them just behind the camera so they're not rendered, but must be in front of the main sun light in order to cast shadows in to the alley way. I will then do a quick test render to see what the shadows look like and if there position is suitable. With some tweaking in the position of the boxes I was able to get them in a good enough location to cast some nice shadow effects across the front of the building.


Fig.03

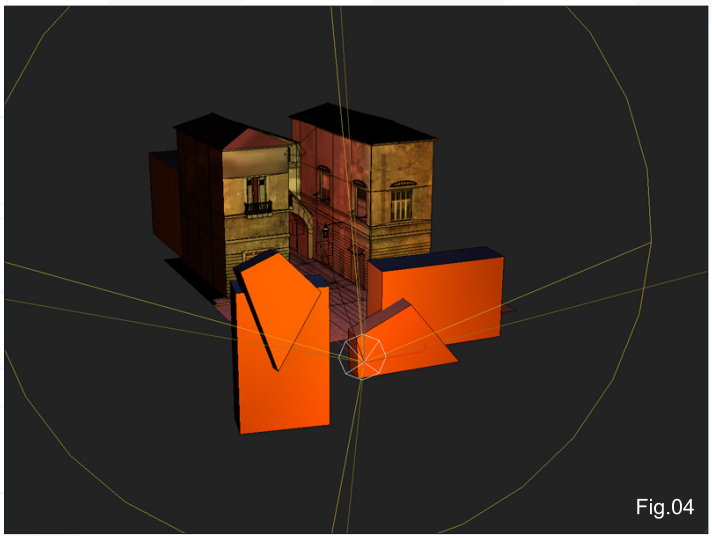
Fig.04


Fig.05

The boxes are very simple at the moment and it shows in the render so in order to get something a little more interesting I will add some extra faces to the boxes and create a simple siloette of a typical building shape.

Here is a perspective view of the whole scene with my fake simple buildings positioned correctly. (**Fig.04**)

Here is a render of the newly placed shadows. (**Fig.05**).

Now that the background shadows are in place a new problem occurs to me. The shadows are to dark and black. If this was in the real world the shadows would be lighter and the blueness of the sky would add a blue tint to the shadows. So to solve this problem I simply added a Mr-Area Omni light in the middle of the scene and about half as high as the buildings. I gave the light an intensity of 0.7 and a bluish colour. This light would effect the whole of the environment not just the shadows. This shouldn't be a problem as it will give us a sort of global ambience effect. Time for another test render.

Here is a test render of the scene so far (**Fig.06**).

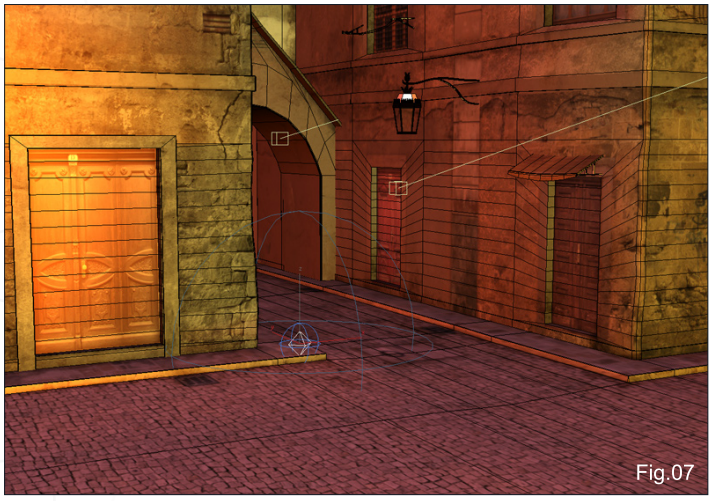
Fig.07


Fig.06

As you can see this immediately adds a whole other life to the scene and improves the image so much. Everything is looking good so I moved onto the tweaking stage.

ADDING SPECULAR HIGHLIGHTS

To add more of a punch to the lighting I need to add some bounce light and specular highlights to simulate the sun reflecting back at the camera. I like the position of the sun light and the way the shadows get cast. So I don't want to alter this to get good bounce light, so I will add some MR-Area Omni lights with a small radius to add that little bit of extra punch to the surface.

Firstly I will add a small Omni light to the curb with the same colour as the sun light I will alter the Omni lights attenuation settings in order to get a gradual falloff to the light this will help make it look natural. The settings I used for this are: 'Near Attenuation' – End 0.07 and 'Far Attenuation' Start 0.07 End 0.4

Here is the position of the light (**Fig.07**).

I like the way the sun hits the blue shutter windows on the top left of the image but again it's not strong enough for me so I will use the same technique and place a MR-Area Omni light with a larger attenuation setting this time and placed it just in front of the doors. The settings I used for this are: 'Near Attenuation' – End 0.25 and 'Far Attenuation' Start 0.36 End 0.6

The wall above the archway is strongly lit. This will cause the area to be almost self lit by the light bouncing off the walls. But at the moment I feel the shadows are quite dark here and the building on the right hand side needs to be a bit brighter where it joins the back wall. So I will place a MR-Area Omni light with a larger radius than previously used and place it just in front and above of the white concrete patch. The intensity will be a bit lower because the wall is already getting the full force of the sunlight and I don't want to over power this area to much.

Here is an image of the position and settings used for this light (**Fig.08**).

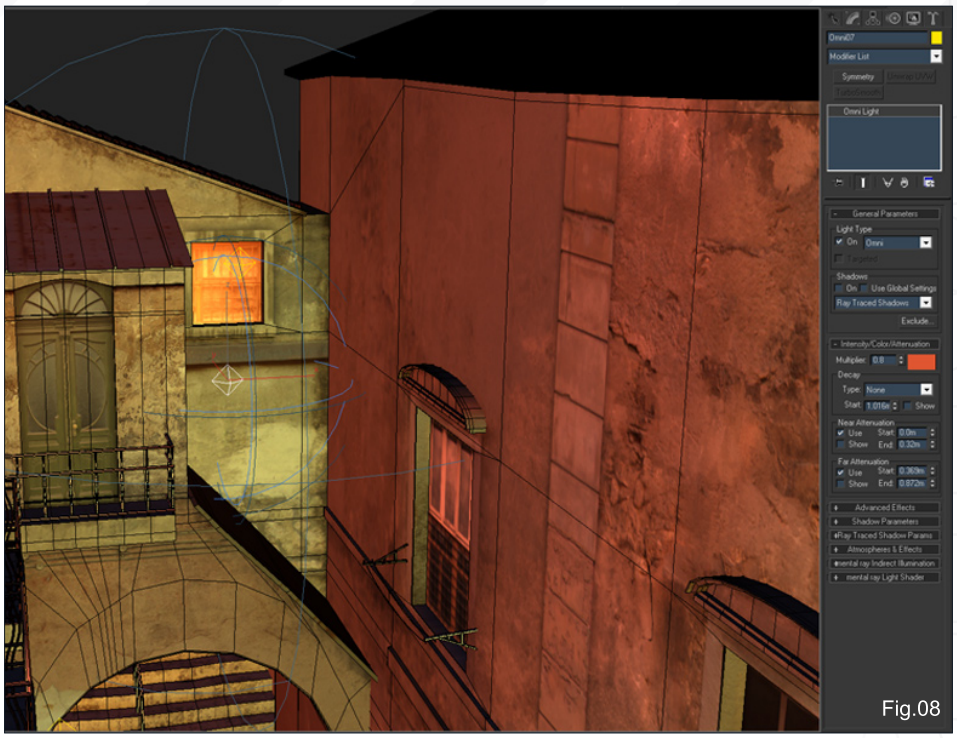
Fig.08

The street lantern is fading into the background a little so in order to make this stand out a bit more I will add some specular highlights to the metal. So I placed MR-Area Omni light with a very small radius in front and just above the lantern this will add a specular highlight to the metal lantern and hopefully help make it stand out more.

Here is an image of the positon of the light (**Fig.09**).

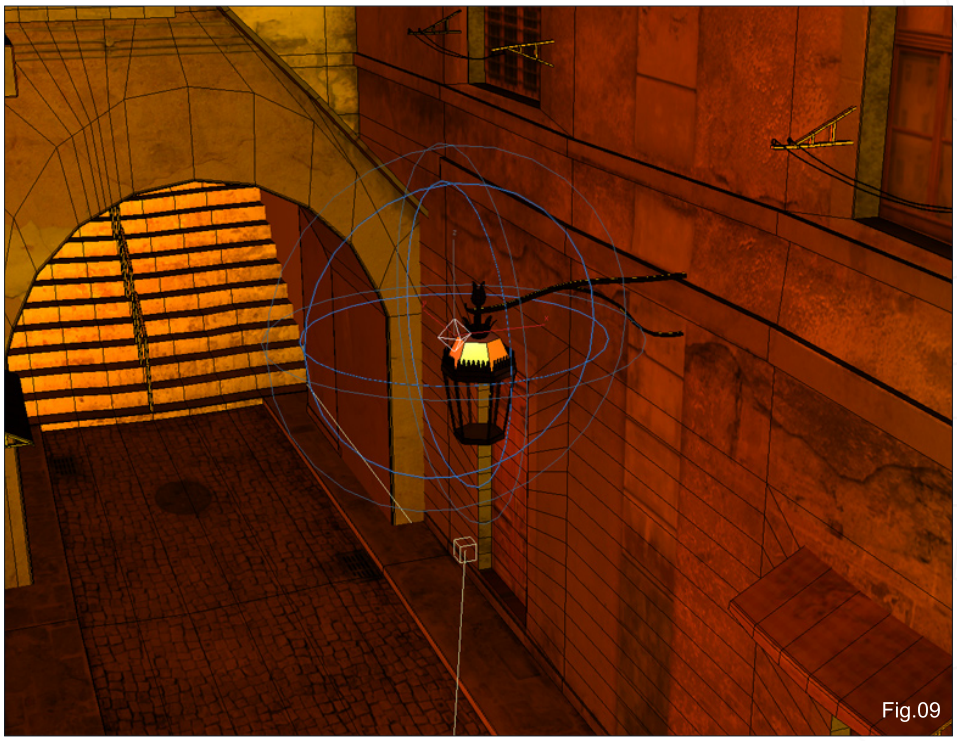
Fig.09

Lastly I would like to add more specular highlight to the window on the back wall. If I use the same technique as previously used I will add to much light to this area. As I mentioned earlier this area was already at risk of being to exposed. So I used a little trick to effect the window only. Going into editable poly mode and selecting the window poly's only I detached them from the main building object and named the new object 'Back Window' I then placed a MR-Area Omni light in front of the window. I edited the Attenuation settings to get a falloff of the light being cast I wanted it to fade as it hit the side walls. With the light still selected I clicked the exclude button in the lights General settings tab. A new window will appear with a list of all the objects in your scene, and an option at the top saying "Include" or "Exclude" These options allow you to include or exlude objects from the lighting cast by this Omni Light. So I will check the "Include" option and select the 'Back Window' object. This will include only the window object and exclude everything else from this light. The window will now receive a strong specular reflection from the light giving us the illusion of the sun light reflecting off the glass and into the camera.

After adding those little tweaks it's time for a medium sized render to give us a clearer picture of what the final render will look like and show us any problems that may need resolving before we start a final render.

Medium Render

I set the renderer to medium image precision and medium Final Gather settings. I still haven't enabled bounce light yet as it would increase the render times. I increased the size of the render to 800*600 With these setting I was able to see any problems that may occur.

Here is the medium render (**Fig.10**).


Fig.10

I was quite happy with the medium sized render and I couldn't see any major issues. Some colour correction needed to be done in Photoshop but this is normal with any image; it adds that extra bit of polish to the art work.
I was now ready to go ahead and set up a high quality render.

Final render setup

Here are the settings used for the large final render (**Fig.11**).

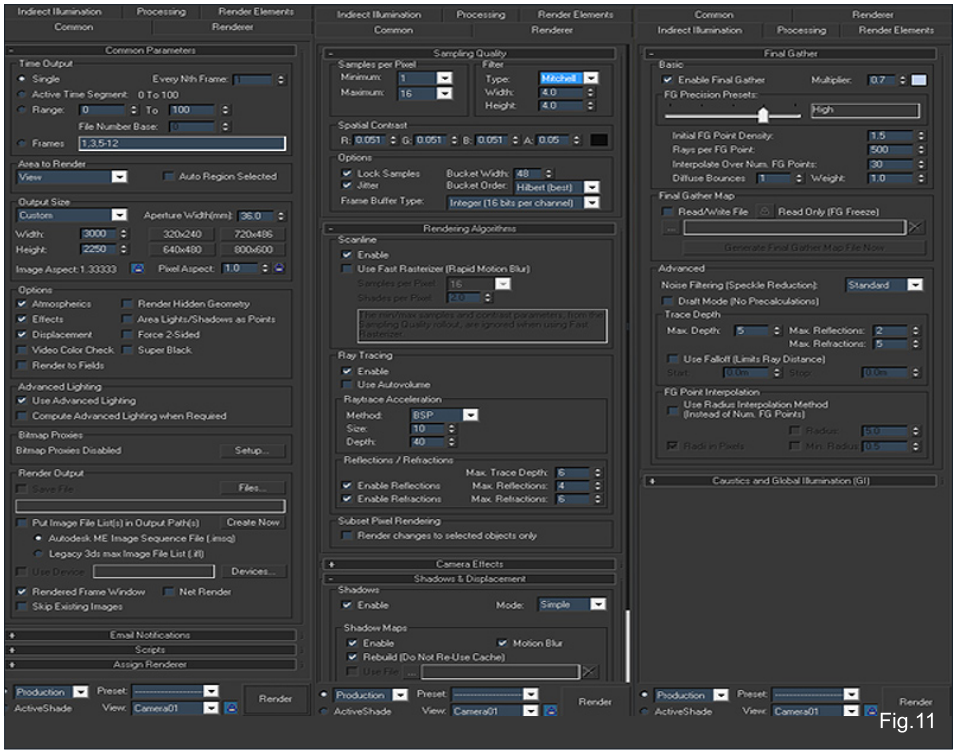
Fig.11

I shall use Alpha and ZDepth render elements and composite them in Photoshop to help me get the best image possible.

So with everything setup it's time to hit that render button for one last time!

Here is an final out come from the Mental Ray renderer. (**Fig.12**).


Fig.12

Now that we have everything we need we can import them into Photoshop and start the polishing stage.

Photoshop composite

I used a 'Levels adjustment layer' to bring out the darks and highlights a little more this adds a lot of quality to your image and is an important stage of the polishing process. I then added a 'Colour Balance Adjustment layer' and brought out the reds and blues a little more as these were the most important colours in this Render, it's easy to over do it at this stage and get carried away but be careful not to stray away from the Colour setup we had in mind at the beginning of this project. I then added a little 'Depth of Field' to give us photorealism. I achieved this by putting the Z-depth render

element into the Alpha channel of the image and in the effects menu added a Lens Blur and set it to use the Alpha channel. After adjusting the settings I was able to get a realistic effect again be careful not to over do it. The good thing about Lens Blur is you can add specular blur to your highlights in the image further enhancing the photorealism we want to achieve.

Here it is, the finished product. (**Fig.13**).

Conclusion

I set out to create a sun set scene and I think I achieved that. I wanted to create something a little more exciting than the more traditional sunset scene. I liked the colours that come with this particular scenario and think it helped bring the image to life. I'm pleased with the end result and hope you found this tutorial useful.

Tutorial by:
Andrew Finch
For more from this artist please contact them:
afinchy@googlemail.com

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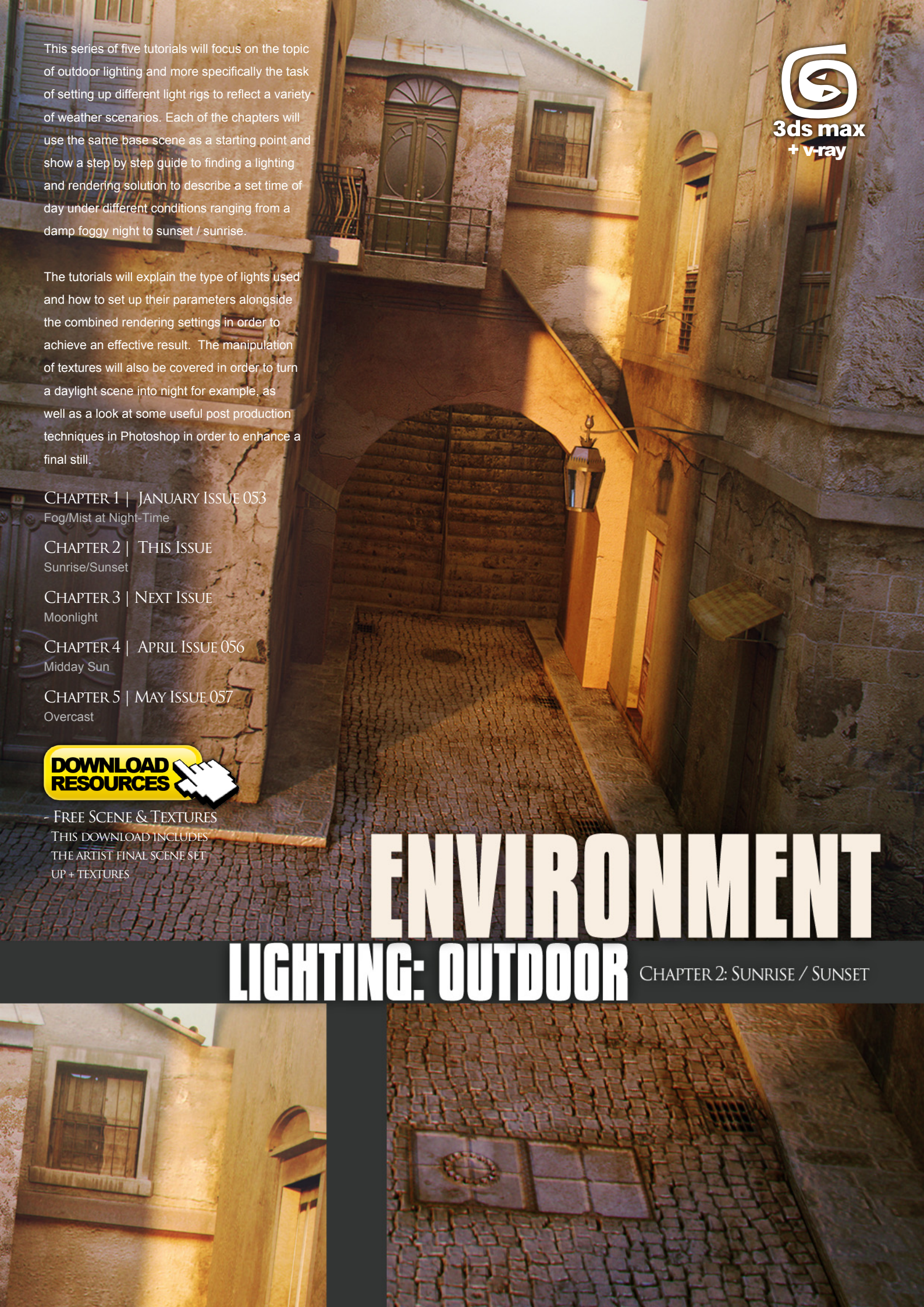
Fig.13



3ds max
+ v-ray

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ENVIRONMENT LIGHTING: OUTDOOR

CHAPTER 2: SUNRISE / SUNSET

CHAPTER 2 - SUNRISE / SUNSET

Software Used: 3ds Max + V-Ray

Before placing a single light in a 3d software, it's good to spend a while, looking at the scene, and thinking, imagining a bit. The assignment is pretty clear - sunset/sunrise - that's the 'prime directive'. But that is not all that matters. Composition of the image is important, regardless of the lighting scenario we have to achieve – and that too can influence light placement, strength and color. Visual style, art direction is important as well – is it supposed to look real, photo real, stylized? Finding some reference can suggest few ideas, how to achieve our task. It's also good to think about technical aspects – is it going to be a still image, or is it for animation, should it render really fast, or maybe we have some computing power at our disposal? But nowadays, when the computers are fast, it's not always that important.


Fig.01

So how does all that theory work in real life case? Well, there are two most obvious (and easy to recognize) ways of showing a sunset. In the first one, the sun is behind the camera. The shadows of the buildings, especially off-screen ones, can become a very important element of the scene. Because there are parts of the image in warm sunlight, and some in the cooler shadows, there can be quite a lot of color variation (**Fig.01**), and the contrast isn't very high. Second approach, we are looking at the sun – there's a lot of bright light, things are shiny (because of the glancing angle of the sun rays), there are nice, long shadows, and the overall contrast can be quite high, but there can be little in a way of color variation (**Fig.02**). Both ways differ in mood quite a bit - of course, you can choose somewhere in between – it depends on the scene, and on the story you want to tell. There are similarities, too. In both cases, sun is our main (key) light source. Sky acts as a fill – but the ratio between the two is different.


Fig.02


Fig.03

This looks like a great candidate to use Vray Sun&Sky system as a base of our light setup, at least at first glance. While it should work for the first scenario, it may not be flexible enough for the second one – in that particular scene. The arch at the end of the street blocks the horizon, (**Fig.03**, marked red) and whole scene would be in shadow... unless we try something else.

Let's start with the first approach.

To render the scene, I'm using 3dsmax with Vray, with GI turned on. I most often use Irradiance Map for first bounce and Brute Force for the secondary bounces – that is the default setting, which works for me in most cases (**Fig.04** – preview setting). Detailed settings, like number of bounces, or Irradiance Map size of course vary over time – low quality for previews, higher for final rendering. For still images, as in this case, I try to use fastest (lowest) setting possible, while still getting acceptable result. For animation, the Medium Animation setting is usually safe, flicker free option. I also use a hint of global Ambient Occlusion to add some detail to shadowed parts of the image.

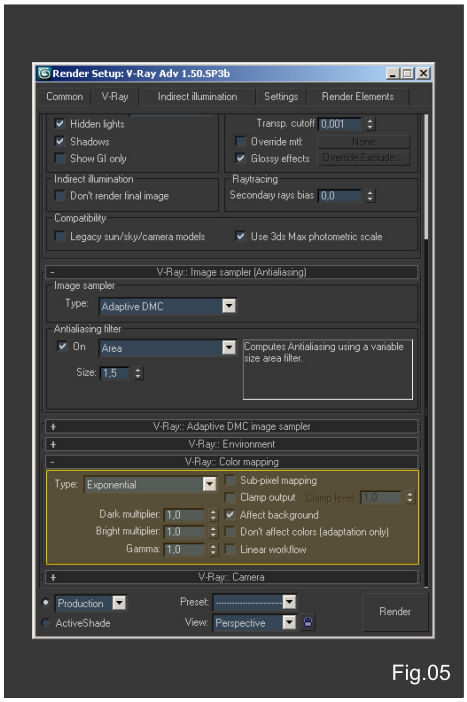

Fig.05

Next thing I did was setting the Color Mapping to Exponential (**Fig.05**). While this isn't probably the most physically correct way, it has some advantages. The way it works, it prevents overbright 'hotspots', and oversaturated color transitions. It's also very tolerant – it's really hard to whiteout the image, and the lights have a very wide range of usable multiplier/strength setting (but that range often ends up being pretty high, like 512 or so, especially with the fog on). It has downsides, too, making the colors look desaturated, and decreasing the contrast of the image. I actually like it that way, because I can easily bring back the contrast and saturation in post production, and for some scenes it just fits – but if you don't like it, there's HSV exponential mode, which keeps the colors better. Generally, though, main use I have for default, Linear Multiply, is rendering some additional passes, like masks.

Fig.04

Then, I've set up the road surface (**Fig.06**). A simple Vray material, VrayDisplacement modifier, and we are good to go. I also added some reflections to the windows (using blend material, VrayMtl for the windows, and a b&w mask). Metal parts, like railings and lamp also use shiny, reflective VrayMtl.

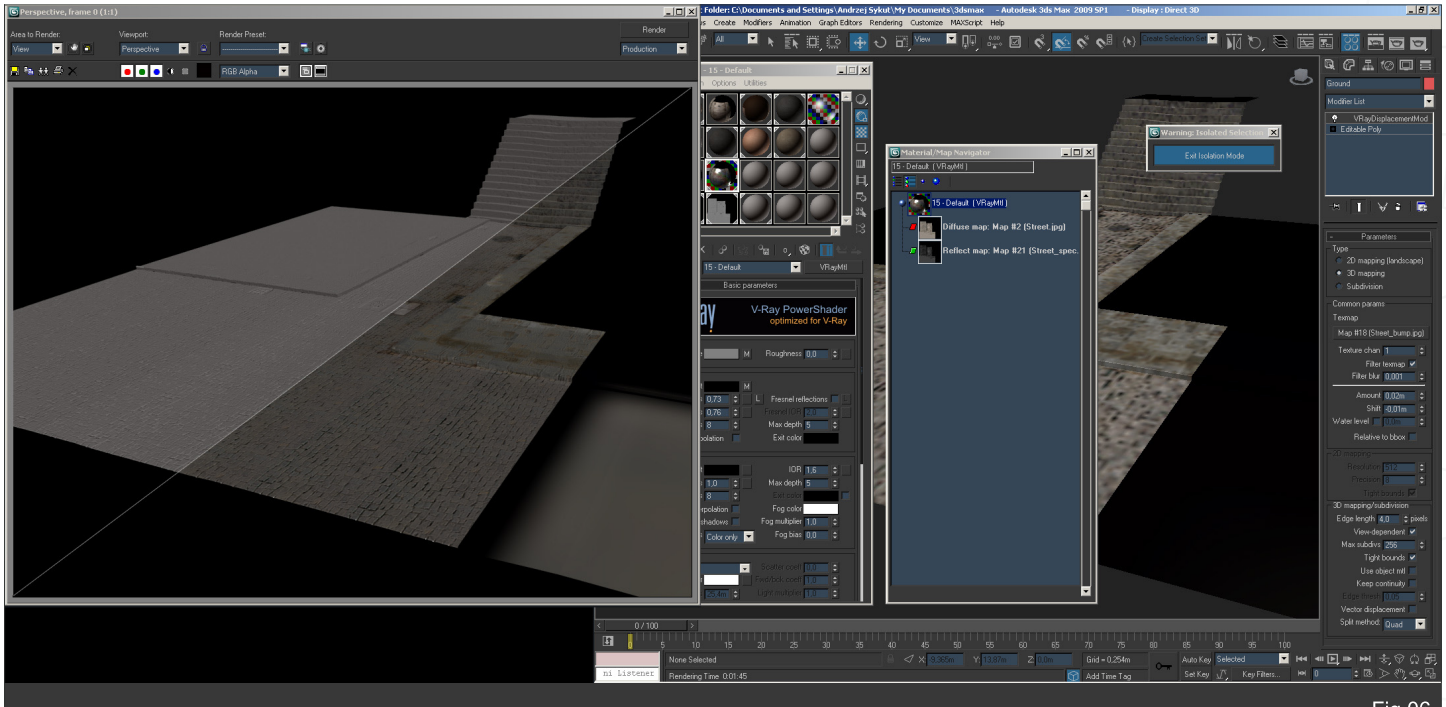

Fig.06

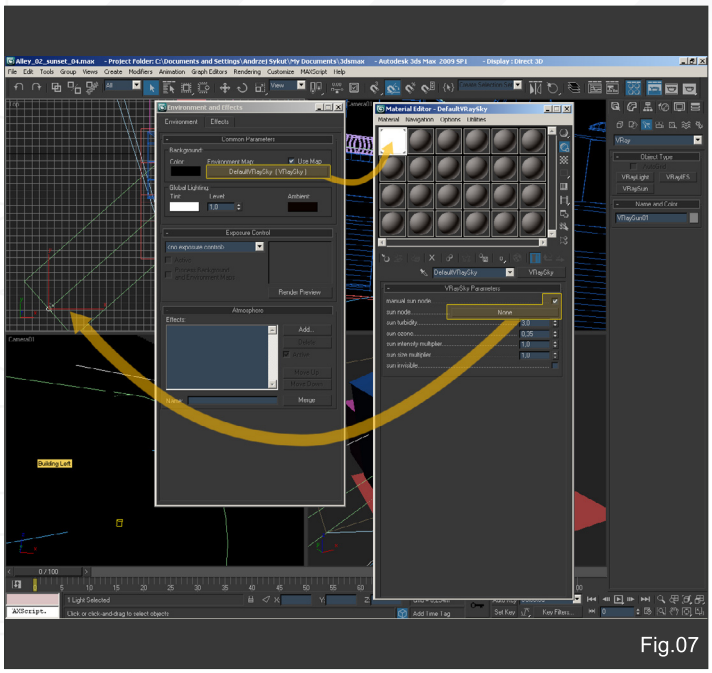

Fig.07

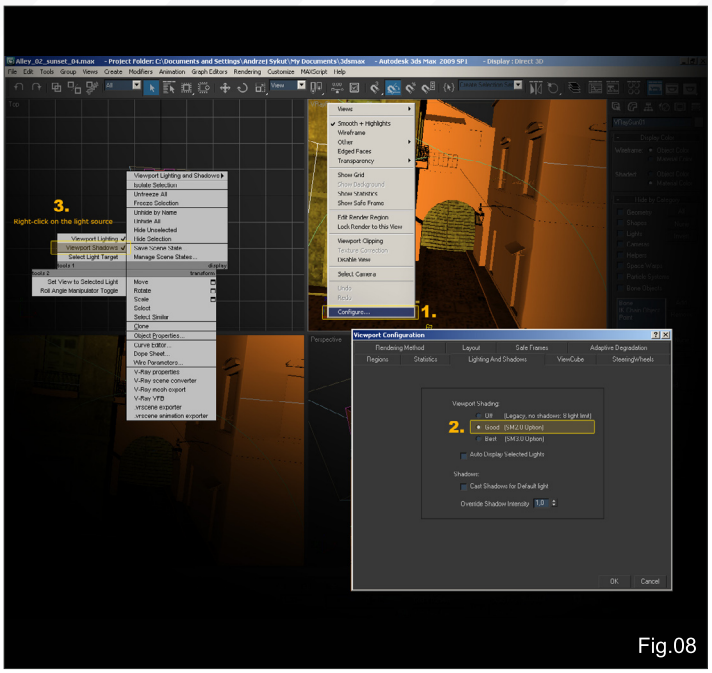

Fig.08

Now it's time to create the sun. Let's choose VraySun. The pop-up will appear, asking about adding VraySky in the Environment slot – I hit OK, since I'll need it. Next I switched VraySky to manual sun node, and pointed the newly created VraySun as the sun node (**Fig.07**). To have a bit more control, I used two variants of the sky – one for lighting, using Vray's environment override, and one to be visible. The difference is in the sun intensity multiplier.

To position the sun, it's good to display shadows in the viewport (**Fig.08**). That way I can see the shadows in real-time, and finding a nice composition is really fast... but wait, there's nothing that could cast shadows on our street. It's easy to fix – just draw few skyline-shaped, angular splines, and extrude them a bit, then place roughly where the

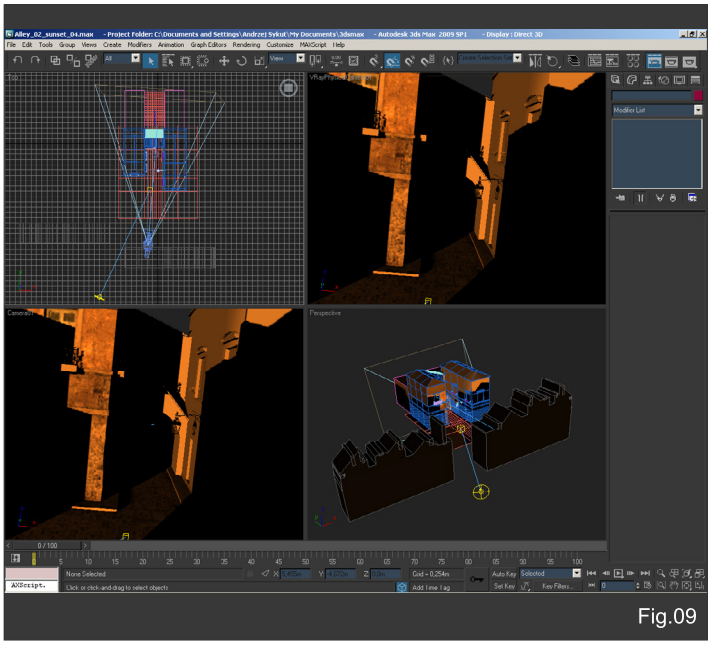

Fig.09

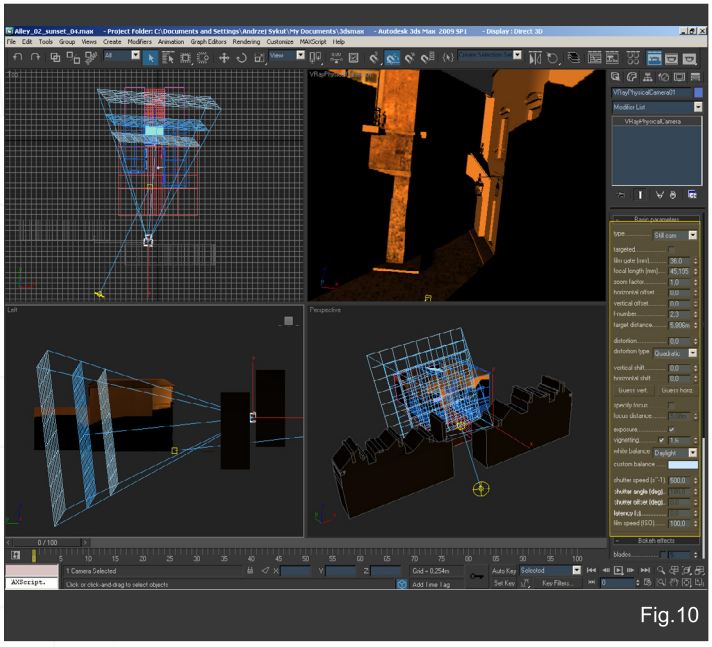

Fig.10

other side of the street would be, and tweak from there (**Fig.09**). Here I chose the to have a nice, lit path into the image, and dark shapes on both sides.

Before rendering anything, I created VRayPhysicalCamera, so I could control the brightness of the scene in more intuitive way (as I have a bit of photographic experience). The settings pictured on (**Fig.10**) took some trial and error to get them right – generally, if the scene is more- or less build in real world scale, the settings that would work if we were to take a photo of that scene in real life, are a good starting point. The Vignetting option is quite useful here, darkening the corners of the image, and focusing the viewers' attention at the central part of the image. I also adjusted the sun brightness, and size, to get nice, soft shadows.

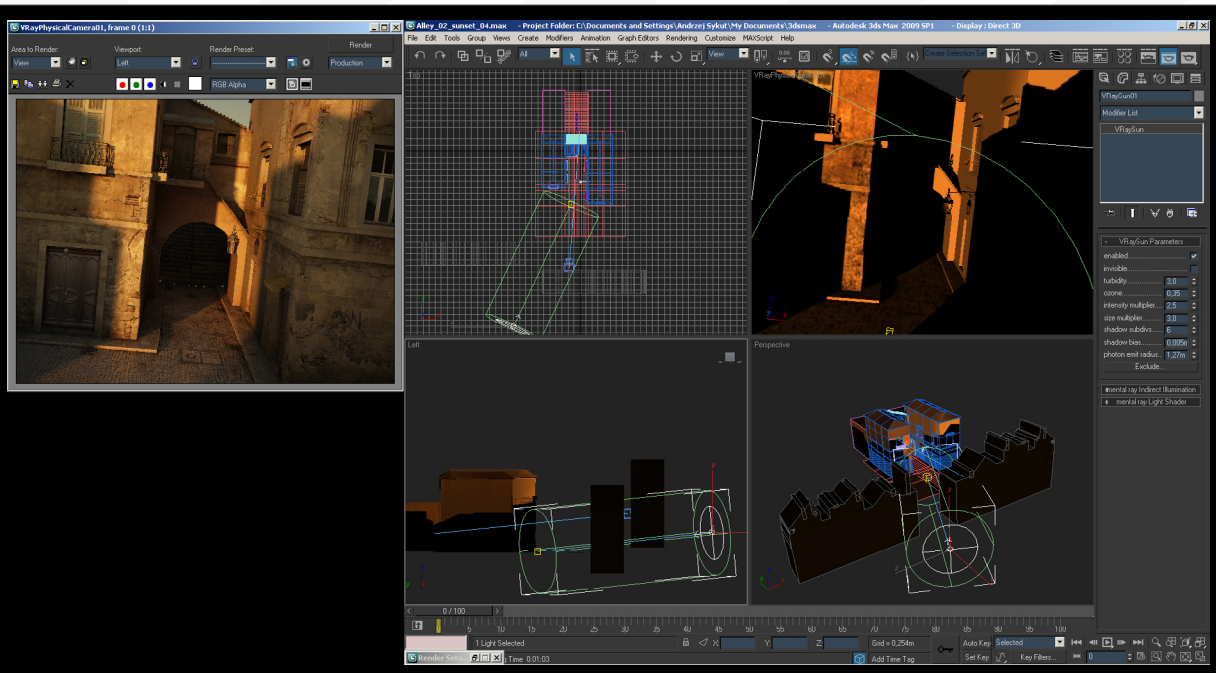

Fig.11

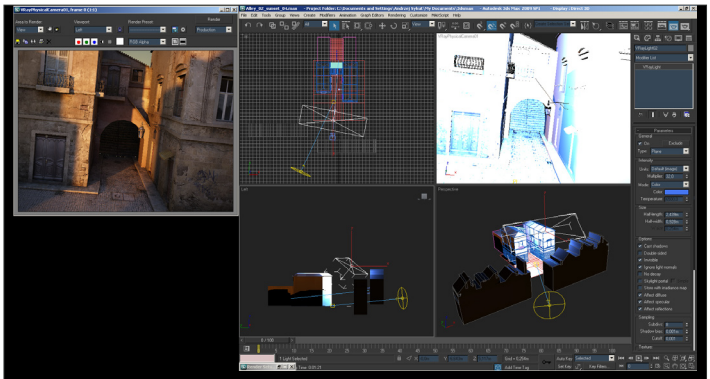

Fig.12

Let's see what we've got (**Fig.11**). Not that bad, but could be better – I'd like some more blue in the shadows, and some more light in the central part of the image. I added a big blueish Vray Light above and to the front of the scene (**Fig.12**). This gives more color variation, and, as it is, looks more like a sunrise, - but it's easy to go back into sunset territory, with few tweaks in post-production. Another, smaller light further along the street (**Fig.13**) lights up the arch wall, which was bit too dark for my taste. I've also added a small light behind the arch, so there's no big flat dark spot in the center of the image (**Fig.14**).

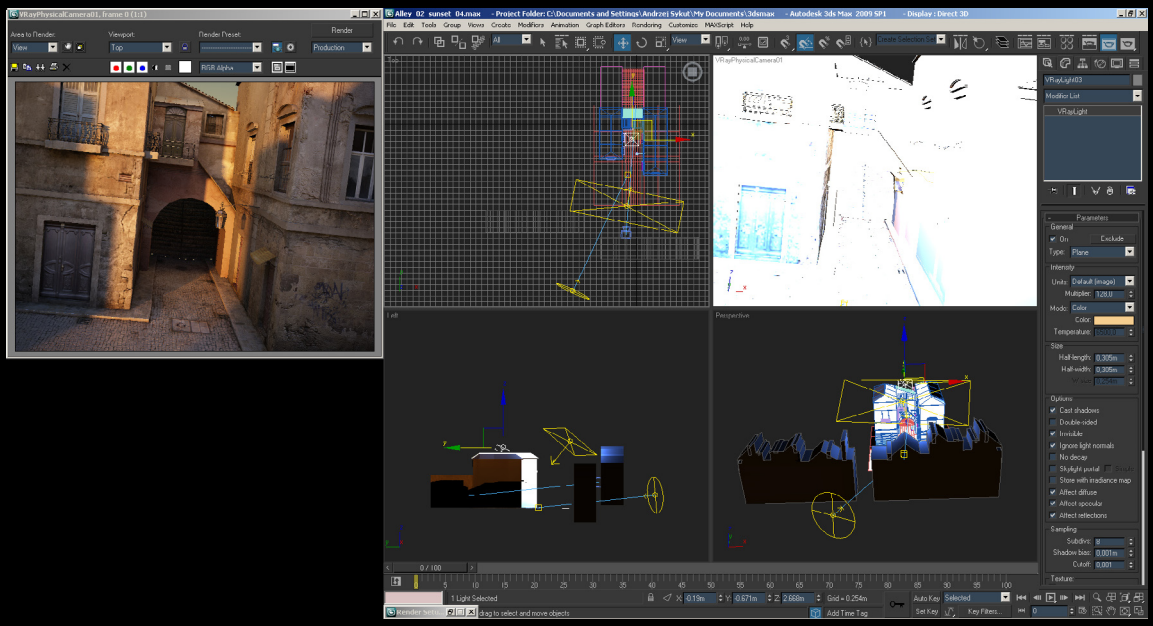

Fig.13

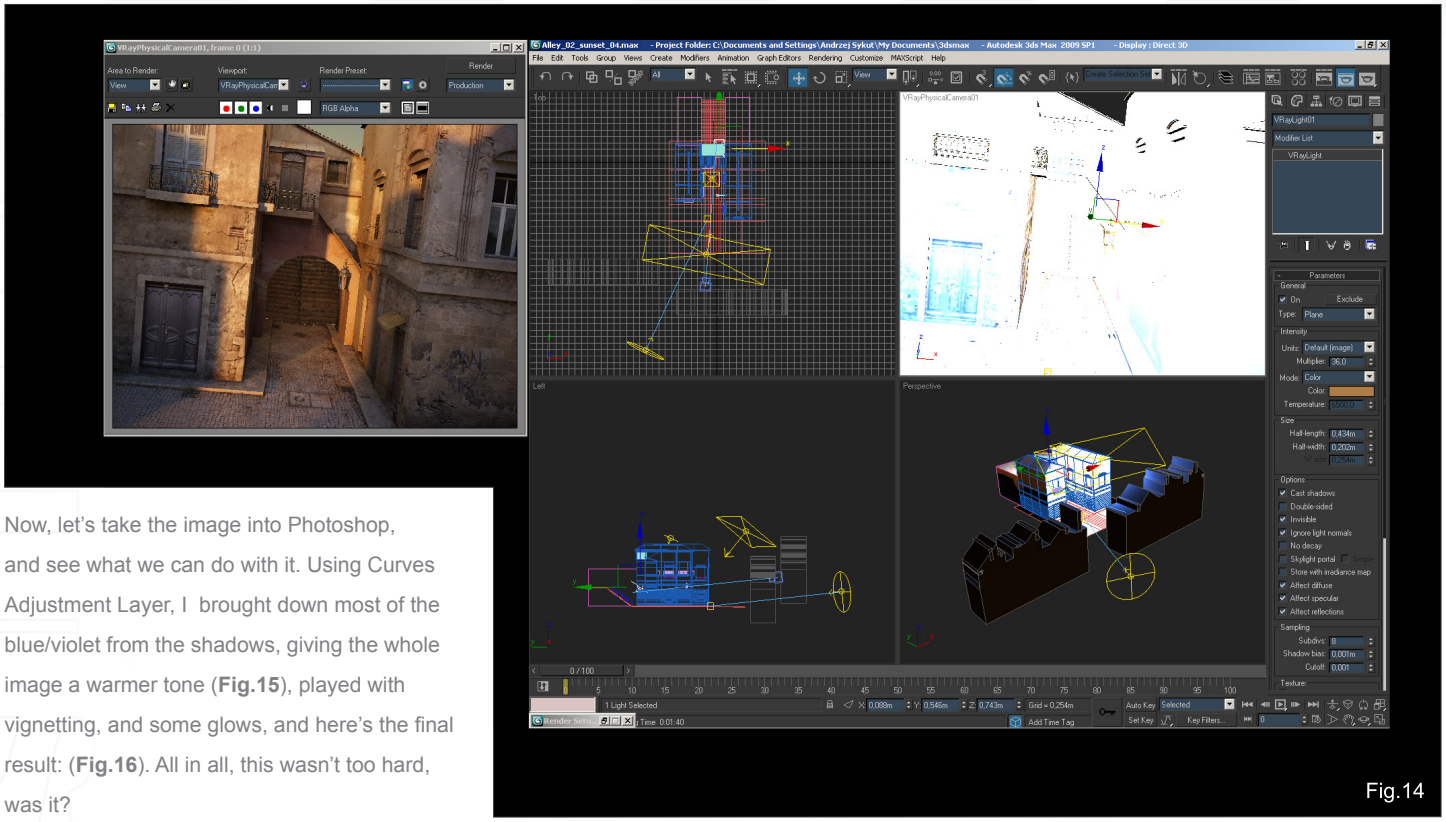

Fig.14

Now, let's take the image into Photoshop, and see what we can do with it. Using Curves Adjustment Layer, I brought down most of the blue/violet from the shadows, giving the whole image a warmer tone (**Fig.15**), played with vignetting, and some glows, and here's the final result: (**Fig.16**). All in all, this wasn't too hard, was it?

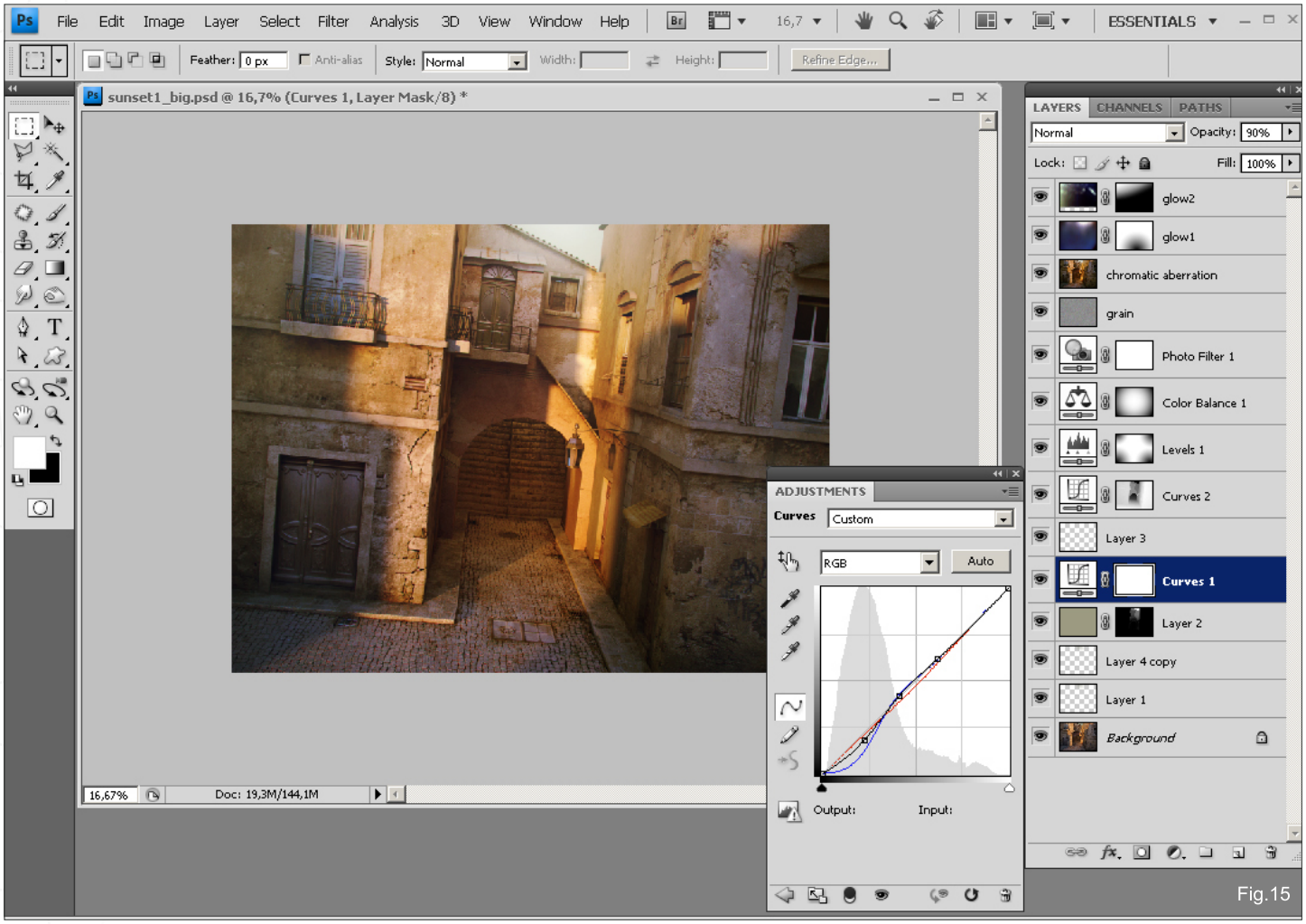

Fig.15

Fig.16

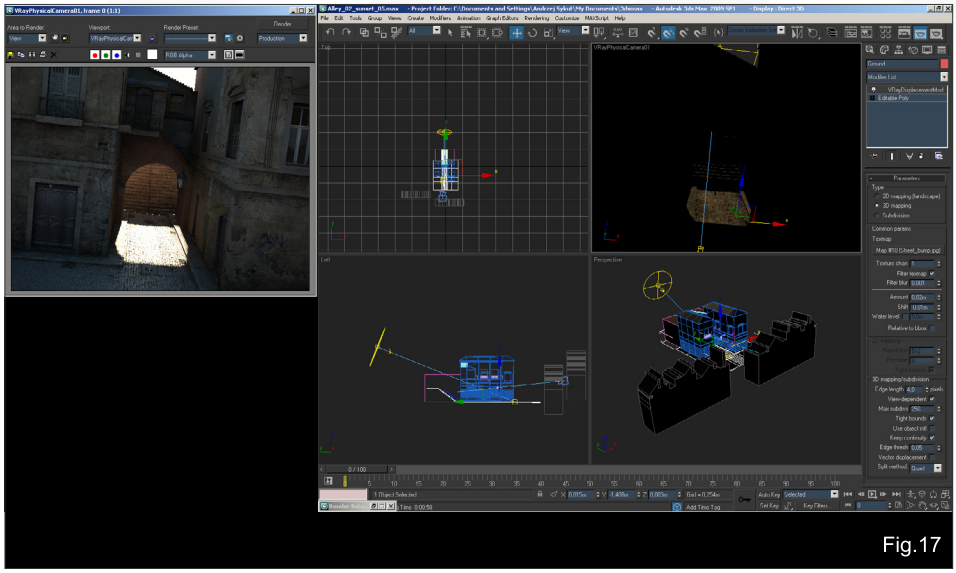
Fig.17

The second scenario is bit more tricky. Let's start with the scene I've just finished, and remove all lights except the sun. If I set the sun where I want it, and render, the colors are all wrong – cold, blue, instead of war browns and oranges. Simply the sun is too high to have proper warm color (**Fig.17**). If I swap the VraySun for the standard Directional Light, I can have full control of its color. I replaced the VraySky (the one doing the lighting, in Vray override tab) with a HDR photo of a sunset (To be honest, the scene would probably work

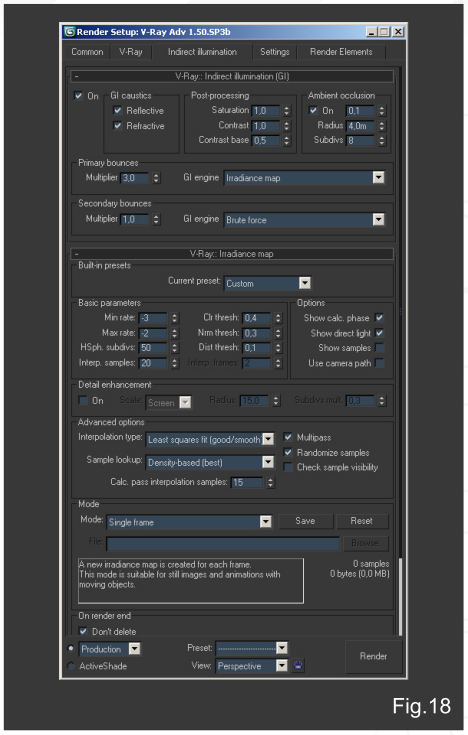
Fig.18

even without it, as its effect is subtle, and most of the lighting will be done by hand. Still, it's some starting point.), bumped up the Primary Bounces multiplier, played with AO settings, and Vray camera settings (**Fig.18**) - and the colors start to look right, but the scene is way too dark (**Fig.19**). The walls of the street are in shade... as they probably should, but I'd like them to catch some light, so I put a squashed, spherical Vray Light under the arch (**Fig.20**). The right wall has a slightly reflective material (added as a Shellac to the base shader), so there is a nice detailed pattern there.

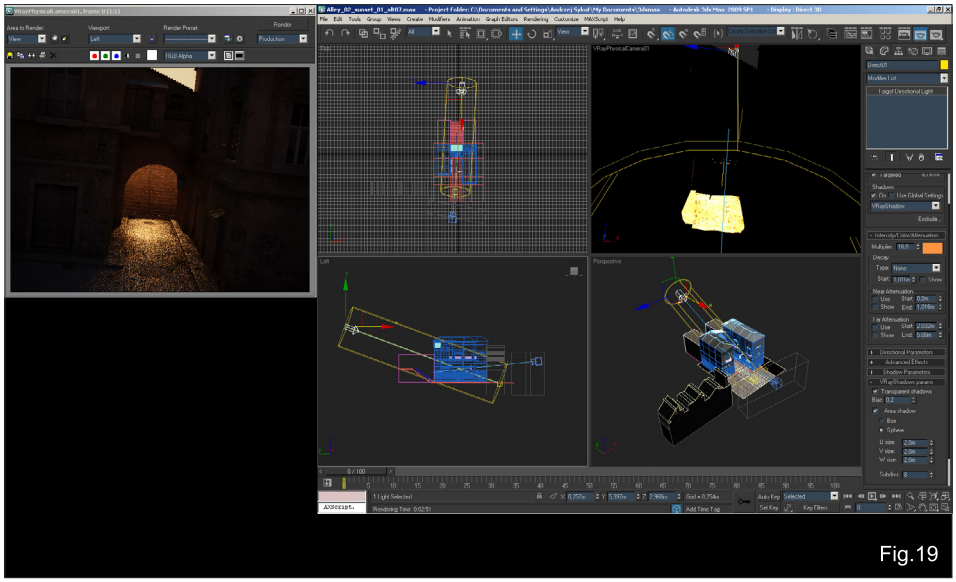
Fig.19

Another light was placed above the roof, to throw some back-light on the wall on the right (**Fig.21**).

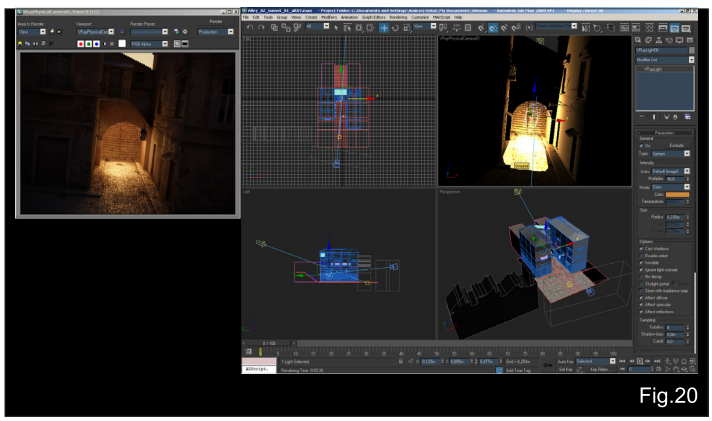
Fig.20

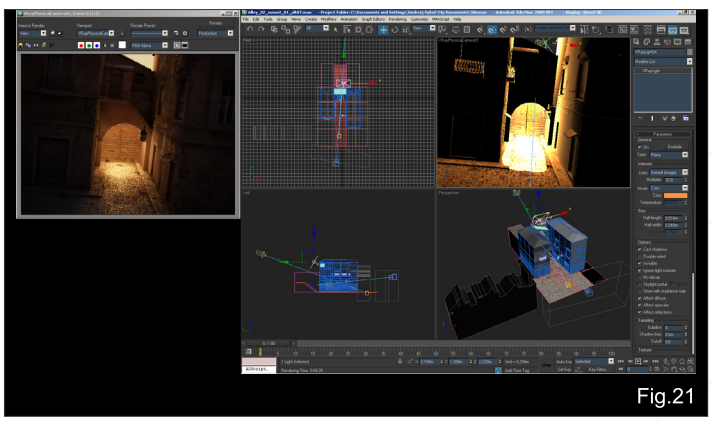
Fig.21

Yet another, quite big one, placed above the street, simulates the light coming from the sky (**Fig.22**) - but it's not enough, so there's another, even bigger one above the camera, facing the scene, providing some fill light on the forward-facing parts (**Fig.23**). Using big area lights has some advantages – you can add light coming from certain direction, but without sharp shadows, which would clutter the image, and without a very characteristic in CG, point/spot light distribution, which is not always desired. Besides, it works like a big softbox/bounce in real world, either in photography studio, or on a movie set. The downside is rendertime, and sometimes noise, if the sampling of the shadows is not good enough.

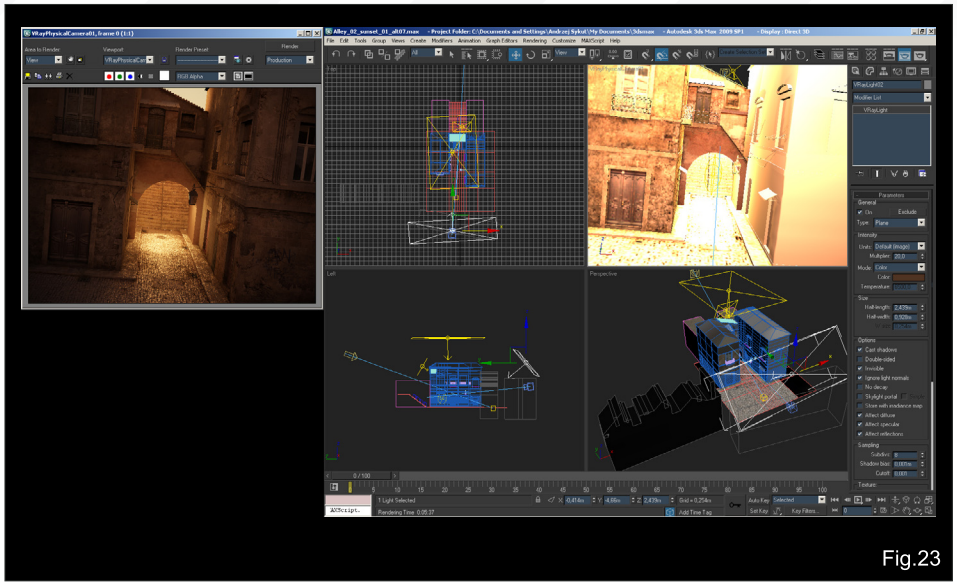

Fig.23

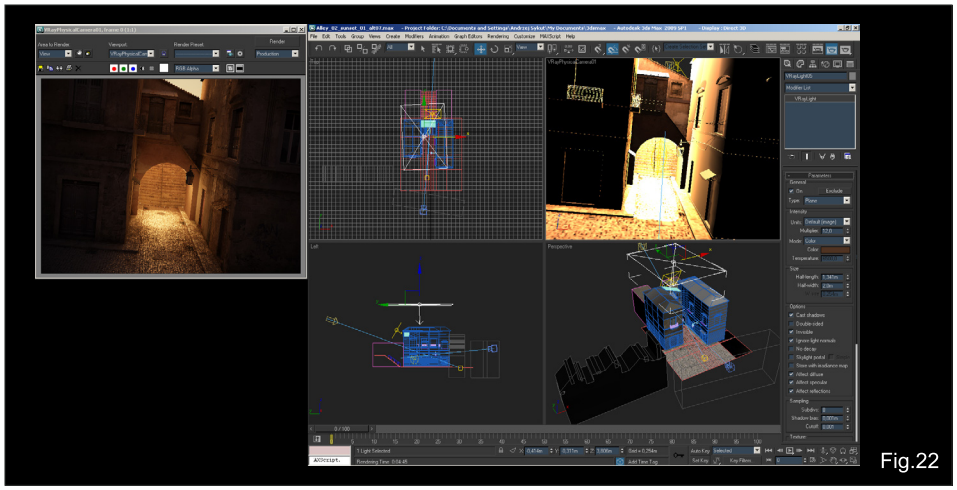

Fig.22

Before final rendering, I tweaked the backlight above the roof a bit – less saturation, bit more intensity, and rotated it a bit – no big deal, really. There's another problem here – a light bleeding in the corner. To fix that, I could use higher quality Irradiance Maps, or try to use Detail Enhancement - at the expense of rendertime – but as the image will be rendered in high resolution, the settings I have now, should be enough (at high resolutions, even the low Irradiance Map settings provide enough information to get a clean rendering). Actually, I've lowered them even more, but that required some slight fixing to be done.

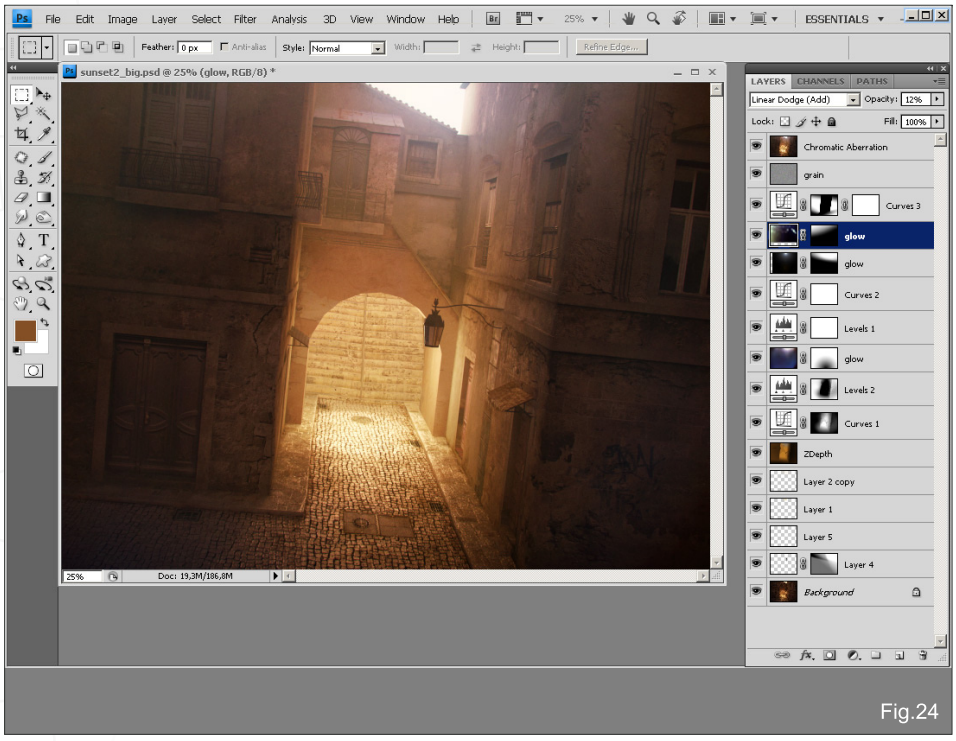

Fig.24

What the scene lacks is some atmosphere – I left that for the very end, for the postproduction stage. I rendered a Zdepth pass, and added slight fog in Photoshop (Fig.24), along with some other simple tweaks. - and the final image looks like (Fig.25).

Seeing those two approaches, we can draw some conclusions. The automatic Sun/Sky system is a great starting point, and in some cases, it's probably good enough by itself. But as good as it is, it is not always flexible enough, and some scenes will greatly benefit from few well placed additional lights – and some will have to be lit mostly by hand – which is not that

hard, once you have a clear direction of what you want to achieve. And that's where some research can be very helpful.

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Fig.25

This series of five tutorials will focus on the topic of outdoor lighting and more specifically the task of setting up different light rigs to reflect a variety of weather scenarios. Each of the chapters will use the same base scene as a starting point and show a step by step guide to finding a lighting and rendering solution to describe a set time of day under different conditions ranging from a damp foggy night to sunset / sunrise.

The tutorials will explain the type of lights used and how to set up their parameters alongside the combined rendering settings in order to achieve an effective result. The manipulation of textures will also be covered in order to turn a daylight scene into night for example, as well as a look at some useful post production techniques in Photoshop in order to enhance a final still.

CHAPTER 1 | JANUARY ISSUE 053
Fog/Mist at Night-Time

CHAPTER 2 | THIS ISSUE
Sunrise/Sunset

CHAPTER 3 | NEXT ISSUE
Moonlight

CHAPTER 4 | APRIL ISSUE 056
Midday Sun

CHAPTER 5 | MAY ISSUE 057
Overcast

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ENVIRONMENT
LIGHTING: OUTDOOR
CHAPTER 2: SUNRISE / SUNSET

CHAPTER 2 - SUNRISE / SUNSET

Software Used: Cinema 4D 11.5

ABOUT THIS TUTORIAL:

This is the second part of a series of lighting tutorials for Cinema 4D.

The files of this tutorial were created by using the release 11.5 but I had no problem to open them in release 10. R 9.6 or earlier does not work, sorry ;)

Concerning the fact, that not everybody owns the Advanced Render or a third party render, I try to concentrate just on the functions of the core-render in Cinema 4D so far as possible. So it should be possible to follow this tuts for everybody. As you might see over this series of tutorials using classical ways of illumination does not mean to get bad results. Another point is that features as Global Illumination (or Radiosity in earlier versions of Cinema 4d) have strong differences in their workflow, parameters and functionality in combination with the release used for your work. The attributes manager contain a lot of folder for the different settings. In the screenshots I only show up areas where changes have been made, the rest is still in default.

SO LET'S START…

Imagine: Night is over and the first warm light beams are crawling over the landscape. The damp of the night is slowly melted away…ok, that´s enough poetry for the moment ;)


Fig.04

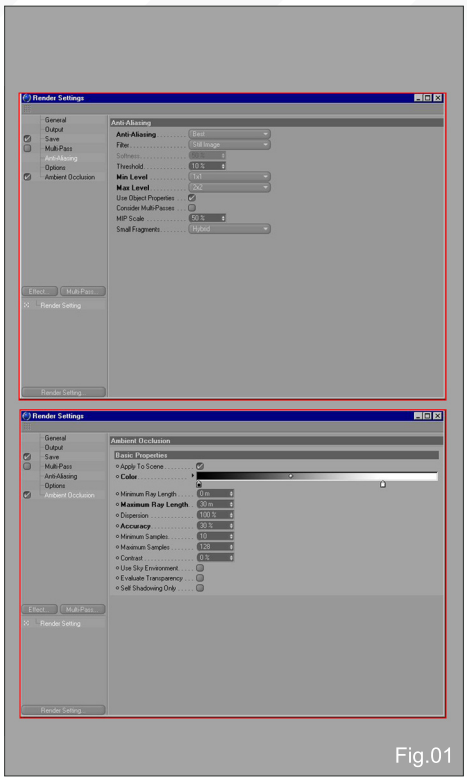
Fig.01

Like everywhere in the nature, we have a special combination of sorts of light. The direct sunlight, the sunlight reflected by walls and the ground, the light bounced by the atmosphere and in some aspect the effect of the damp still lying in the air at such a beautiful morning.

THE RENDER SETTINGS AND THE MATERIALS

While we look at the render setting menu we can see that I used ambient occlusion which is part of the Advanced Render. Well, if you do not have the AR it is not an essential feature to follow this tut. It just looks nicer ;) The other point is sub polygon displacement. To get a workaround, just subdivide the meshes and use the normal displacement in the material manager.

To get a certain main illumination effect, I added a luminance of 5 to 8 % to every material in this set file. This allows us to get an extra gi-fake effect.

The render resolution very much depends on the performance of your system, but using a wide of 320 pixels only might be too small.

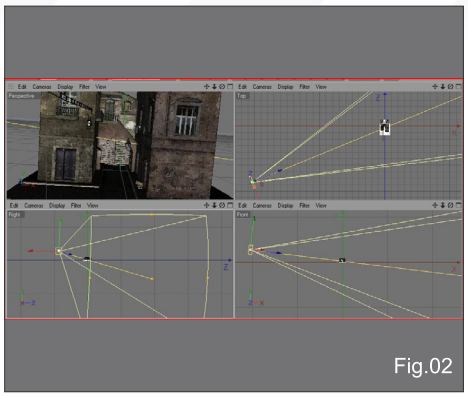
Fig.02

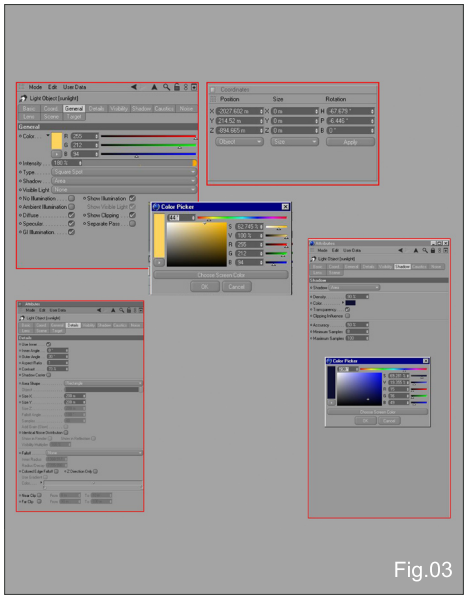
Fig.03

The glow I activated here could be done in post work also.

If you have problems with your render speed while using anti-aliasing, you can set it to "None" of course. (**Fig.01**)

THE SUNLIGHT

Well, this is our main light source, of course. When you look at the mesh file, you should discover the additional planes there. This is to simulate the shadows of buildings lying out of the focus of the scene cam and to get a better control over how the light/shadow distribution in the set. We want to create a more "dramatical" kind of illumination here. The sun is located very close to our imaginary horizon and the color is set to a very reddish tone. Additionally the shadow has a slight dark blue tone at 90% strength. This helps us to accentuate the bouncing effect of the sky. (**Fig.02 – 04**)

THE INDIRECT SUNLIGHT

Now we try to simulate the light reflected and diffused by buildings lined up to the position of the sun. We get a more diffused hot spot but with a certain kind of definition on the ground and the facades. The combined render of these two light sources demonstrates what we have until now. Don`t get afraid of the saturation of colors. This kind of light setting is like a sandwich with different layers working together... (**Fig.05 – 07**)

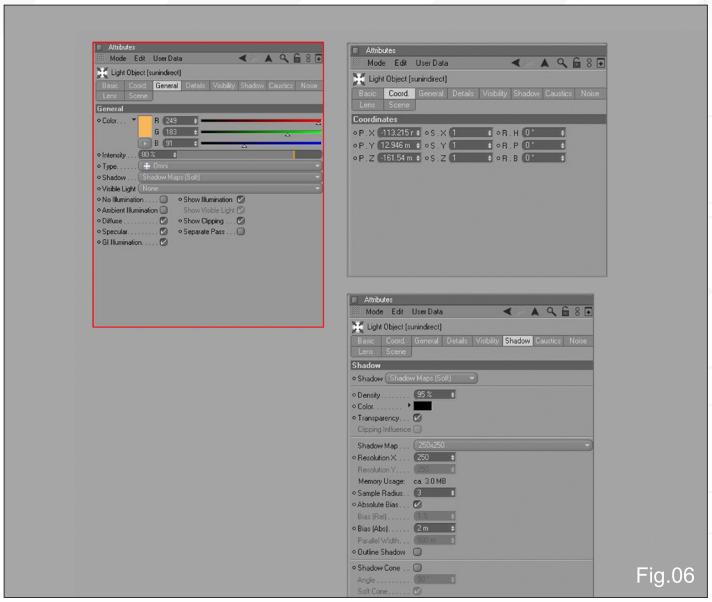
Fig.06

BOUNCING LIGHTS

Bouncing Light 1

We use a spot light here in order to get a full control over the direction the light is pointing at. Choose a blue color here like it is shown in the settings. I excluded the ground from the influence of this light. This helps to avoid distracting shadows and a too unlighted area between the houses. (**Fig.08 – 09**)

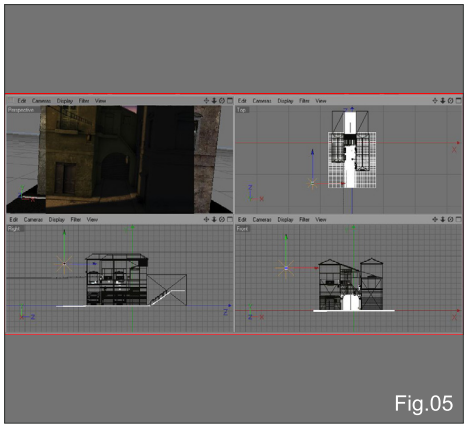
Fig.05


Fig.07

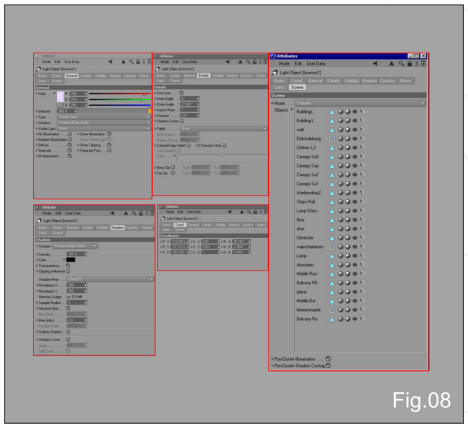
Fig.08

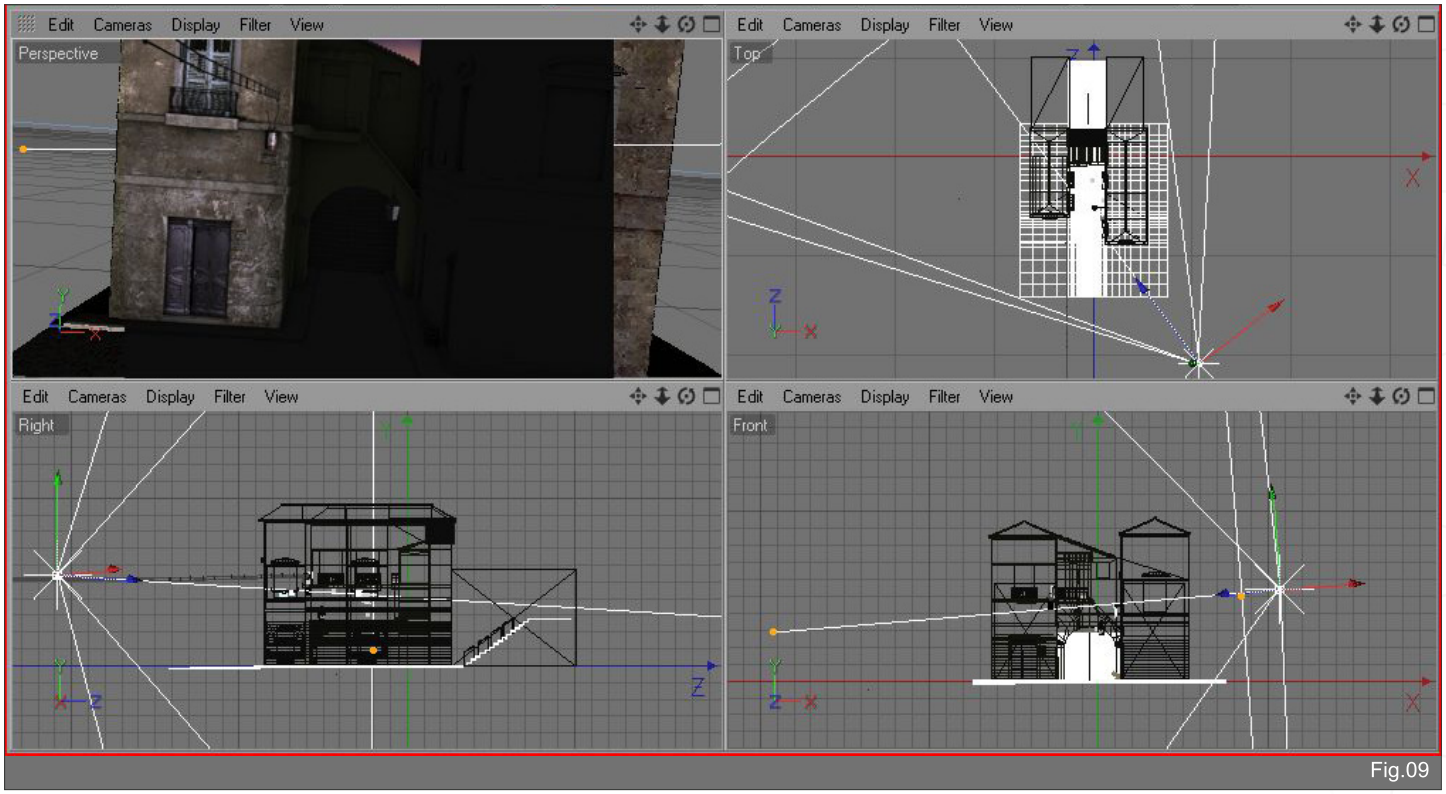

Fig.09

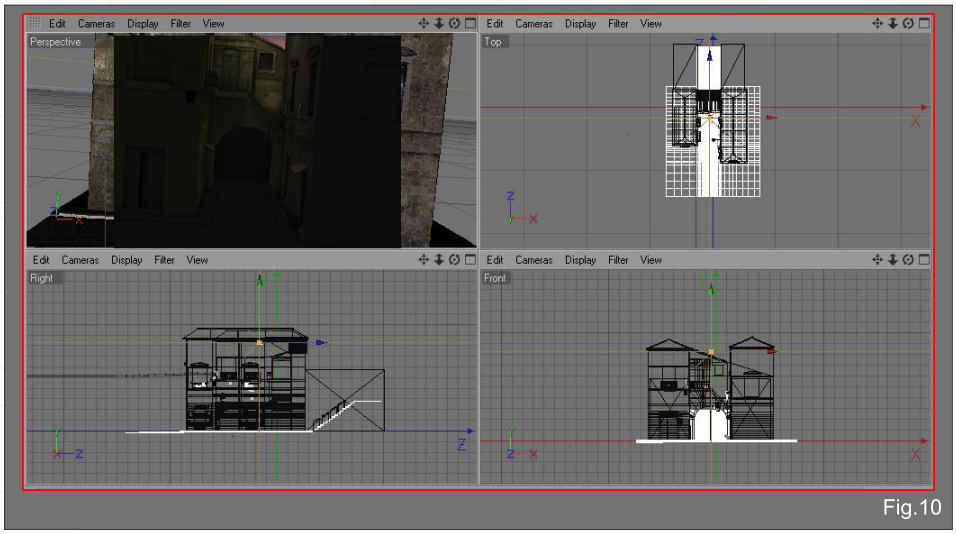

Fig.10

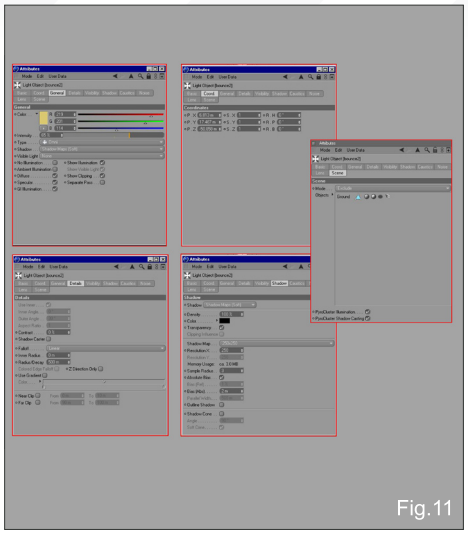
Fig.11

Bouncing Light 2

This light simulates indirect light coming from above. The two bouncer take effect on the facades only. (**Fig.10 – 12**)

Let´s take a look at what we have when the sunlights and the bouncers are rendered together… (**Fig.13**)


Fig.12


Fig.13

EFFECT LIGHTS

While looking over the render, we might recognise, that some extra supporting lights would do a good job for the illumination of this set.

Extra Light on the Ground

Well, as the name declares this light adds some extra definition to the light streak coming from the sunlight and some variation in color. In contradiction to the sunlight I placed the color parameters to pure white here. (**Fig.14 – 15**)

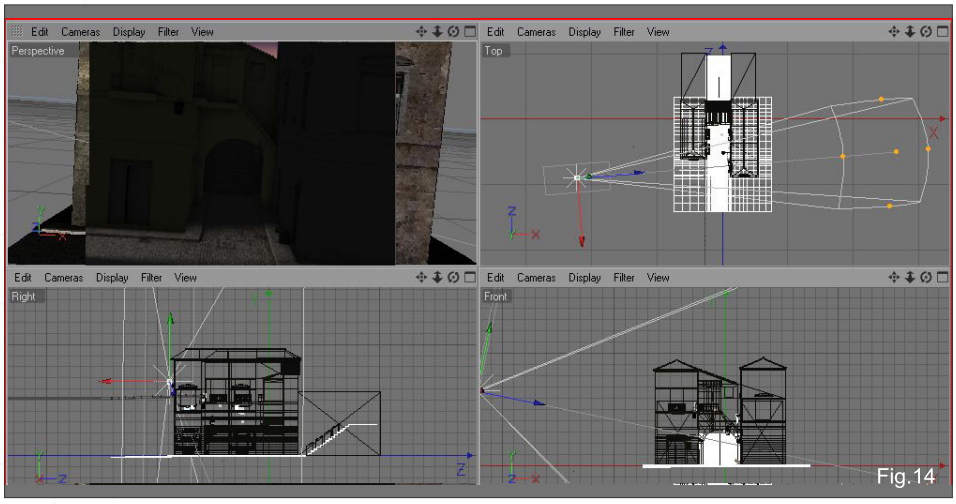

Fig.14

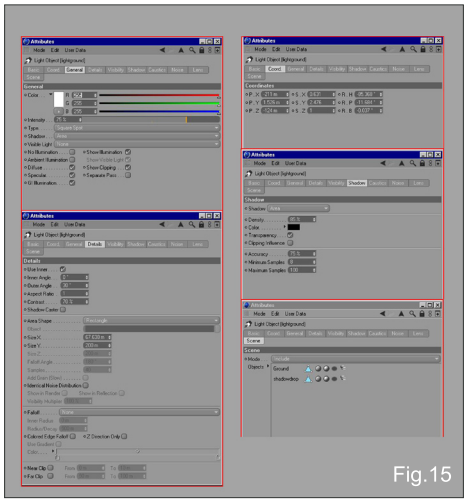
Fig.15

Effect Light 1

Let us add some more diffuse illuminated areas to our scene…

The strength of 400 % for this light is very much compensated by the shadow dropping planes I added to the scene file in the beginning. (**Fig.16 – 17**)

Effect Light 2

Effect light 2 points at the edge of the right building. The possibility of using in- and exclusions is a very great feature in Cinema4d…I really like that ;) (**Fig.18 – 19**)

Effect Light 3

This light source lights up a small corner of the right building near the “sky triangle” , only. (**Fig.20 – 21**)

If everything went right , we should get something like that … (**Fig.22**)

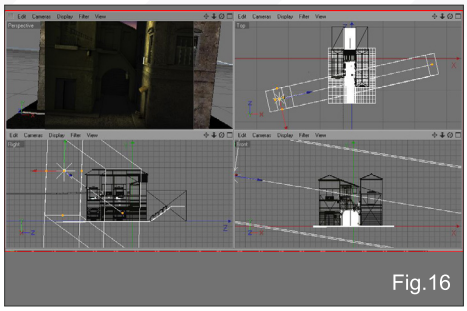
Fig.16

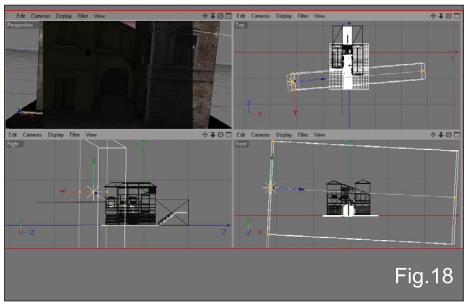
Fig.18

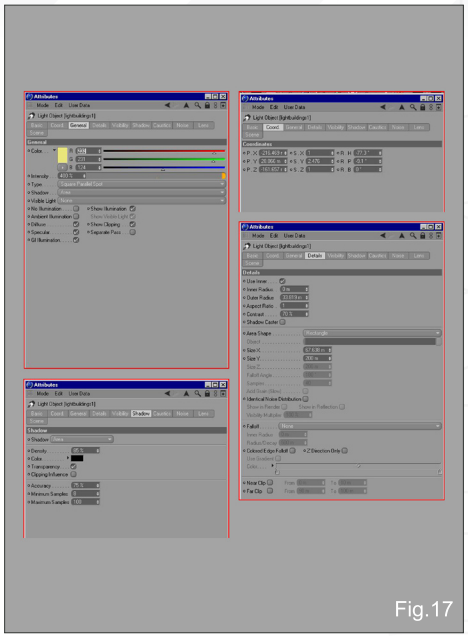
Fig.17

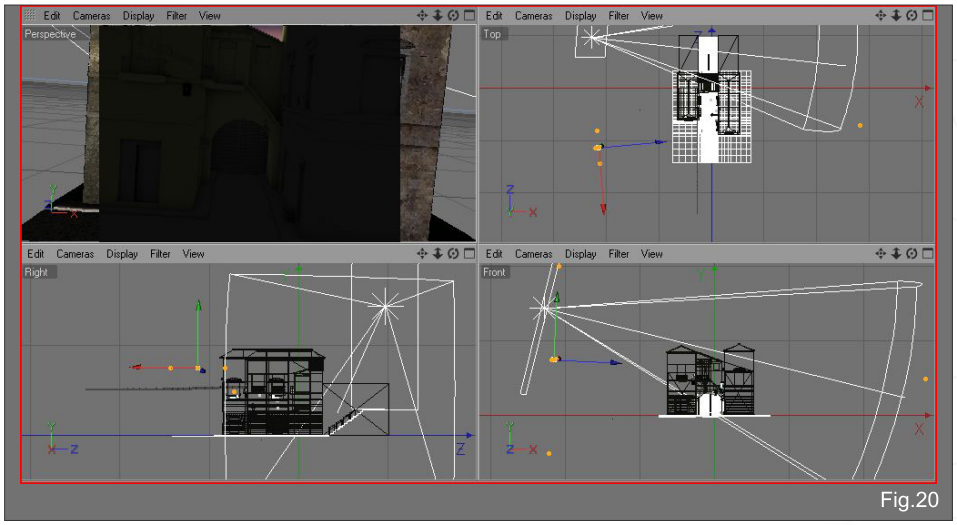

Fig.20

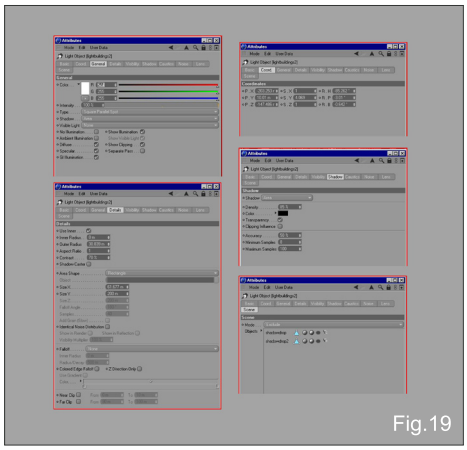
Fig.19

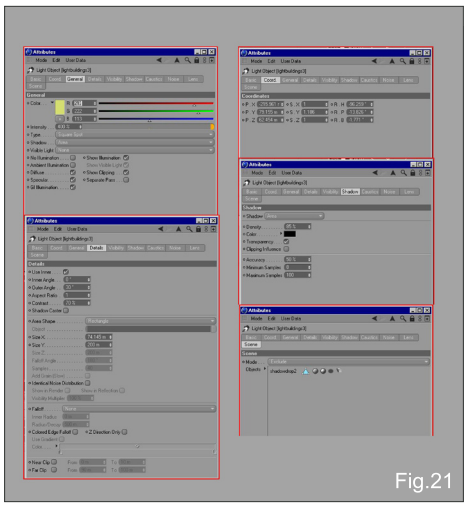
Fig.21

Combined with all layers we created before, the image looks like this rendering, hopefully ;) Quite ready, but not completely. (**Fig.23**)

ENVIRONMENT

As the rendering shows all lights work together in a good way. But up to this state the saturation is too high and we don`t have that certain depth in the atmosphere which is typical for such an early hour of the day. So I added an environment object to the scene. I`ve chosen for a slight blue tone. The distance settings in the parameters of this object define the influence of this feature. The blue tone compensates the warmness of the other lights we created so far. If you take a look to the real situation in nature


Fig.22


Fig.23

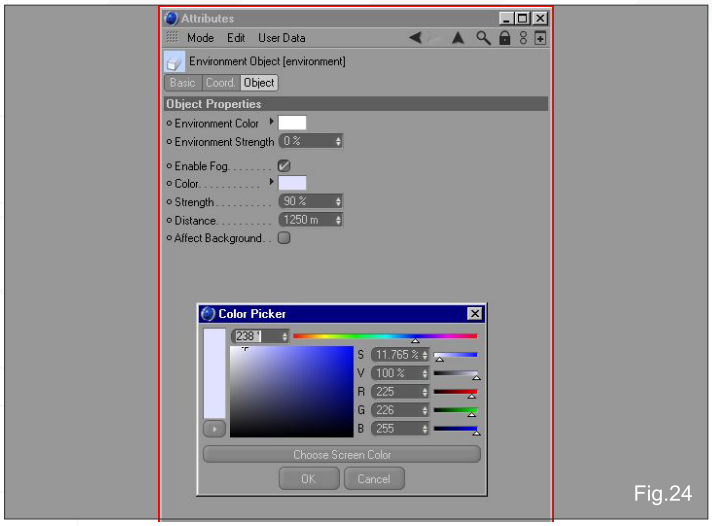

Fig.24


Fig.25

we have this certain kind of complementary color scheme. The sunlight in influenced by the sky and comes in a warm tone. All other areas which are not hit by the sun directly are more influenced by the dark blue sky of the night which is not completely transformed to day light yet. (**Fig.24 – 25**)

Final Render

For the final I added some glow of 3 % strength. The post work in Photoshop is very essential: just a bit of colorgrading and adjustment of contrasts. I hope you enjoyed this tutorial . See you again in the next part , Fredi Voss

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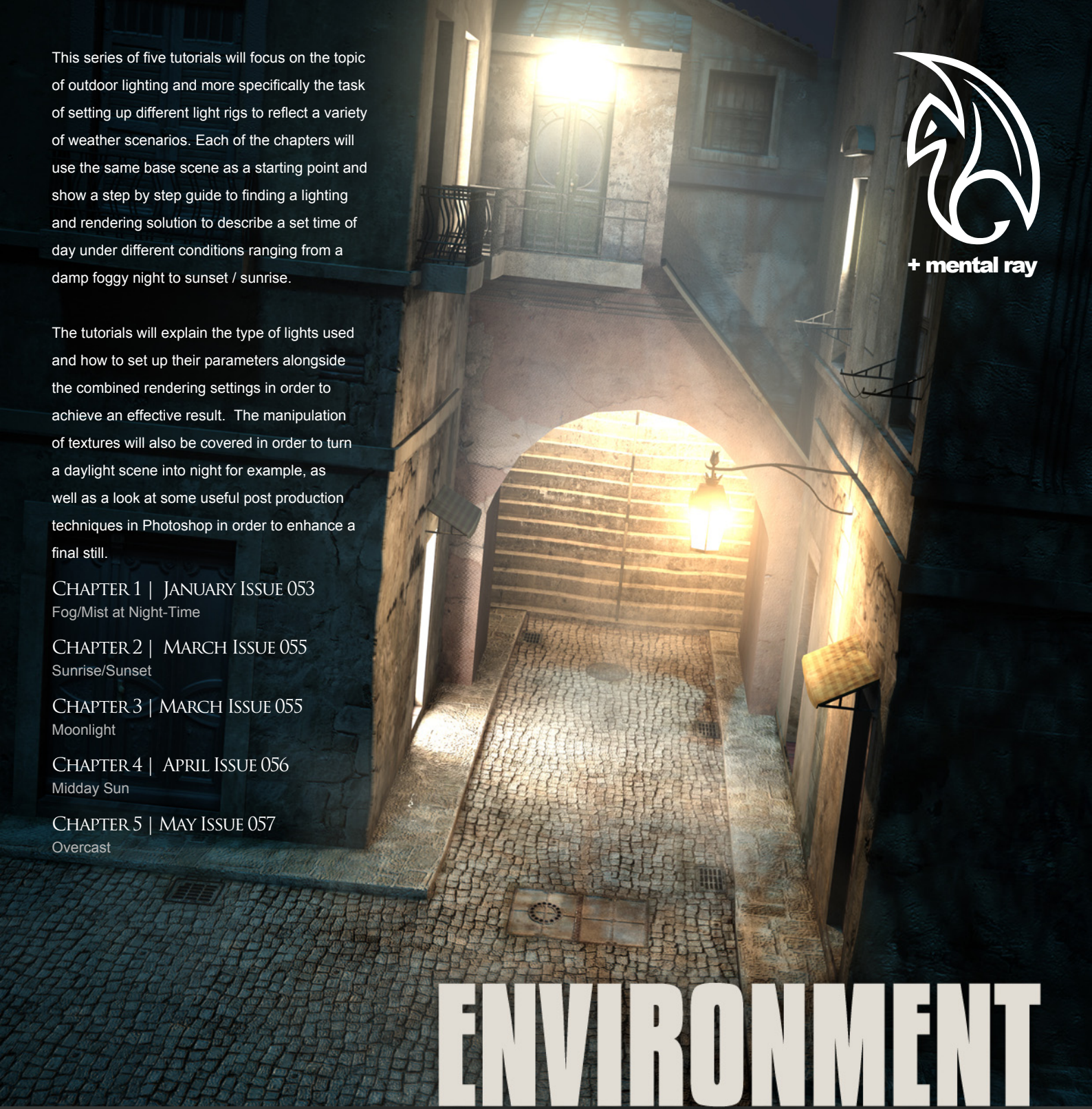

+ mental ray

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ENVIRONMENT
LIGHTING: OUTDOOR

Important Information Please Read

Sadly due to unforeseen circumstances we are unable to bring you part two of the Maya Environmental lighting tutorial. But have no fear, because in next month's issue there will be an epic Maya Double bill bringing us back up to date in the series. We apologise for any inconvenience caused by this and thank you for your patience.